Combination shake/sundae dispenser K 3
Equipment Operating Manual

This manual is for the exclusive use of licensees and employees of McDonald's Systems Inc

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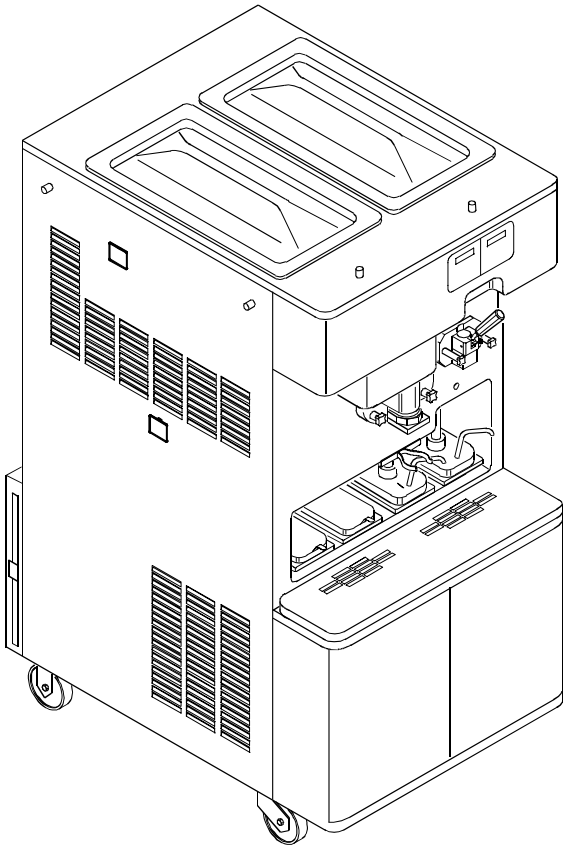

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Warranty

The warranty doesn't cover parts and labor to correct or repair malfunctions or machine failures caused by operator error, machine abuse, unauthorized service intervention or external causes.

Parts Warranty

- Warranty on all component parts except for parts subject to normal wear (such as o-rings, belts, rubber valves, pump gears , etc.): 1 years from date of first installation
- Warranty on the beater motors: 2 years from date of first installation
- Warranty on the compressor: 3 years from date of first installation
- Warranty on the insulated cylinder–evaporator–hopper assembly: 5 years from date of first installation

Replaced parts are covered for 1 year from date of their installation.
Freight and duty on parts replaced under warranty are covered.

Labor Warranty

The labor required to correct component malfunctions or to replace defective parts is provided free of charge for 1 year from date of installation.

Special Conditions

Local rates and conditions for out–of–warranty service will be negotiated between the authorized local service agency and local McDonald's organizations.

This label, filled by the installer, indicating the warranty periods, is placed on the upper part of the right side panel:

WARRANTY EXPIRATION DATES		
START-UP DATE: ***Day-***	***Month-***	***Year-***
ITEM	***PARTS WARRANTY***	***LABOR WARRANTY***
Hopper assembly		
Compressor		
Beater motor		
*All other components**		
**Parts that are normally subject to wear are excluded from warranty coverage*		

Conventional Symbols

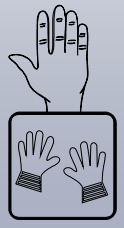
ATTENTION ELECTRIC SHOCK DANGER
The staff involved is warned that the in observance of safety rules in carrying out the operation described may cause an electric shock.

ATTENTION GENERAL DANGER
The staff involved is warned that the operation described may do harm if not carried out in the observance of safety rules.

NOTE
It points out significant information for the staff involved.

WARNING
The staff involved is warned that the in observance of information may cause a loss of data and damages to the machine.

PROTECTIONS
This symbol placed by description side means that the operator must use personal protections against an implicit risk of accident.



SAFETY
When using industrial equipment and plants, one must be aware of the fact that drive mechanisms (rotary motion), high voltage components, as well as parts subject to high temperatures may cause serious damages to persons and things.
Who is in charge of plant safety must be on the look-out that
- an uncorrect use or handling is avoided
- Safety devices must neither be removed nor tampered
- Only original spare parts are to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermostats).

To achieve the above, the following is necessary:
- At working place an instruction manual relevant to the machine should be available.
- Such documentation must be carefully read and regulations must consequently be followed.
- Only adequately skilled personnel will have to be assigned to electrical equipment.

WARNING
The machine must be installed only by a specialized and authorized technician; when installing the machine, insert a differential magnetothermal protection switch on all poles of the line, adequately sized to the absorption power shown on machine data plate and with contact opening of 3 mm at least. This switch is used to cut off the power supply. Any replacement of the power cable must be carried out only by a specialized and authorized technician.

- Never put your hand into the machine, during production and cleaning operations. Before carrying out any maintenance operation, make sure that the machine is in "**STOP**" position and main switch has been cut out.
- It is forbidden to wash the machine by means of a stream of water under pressure.
- Disconnect electrical power before removing any side or rear panel.
- **CARPIGIANI** is not responsible for any accident that might happen during operation, cleaning and/or servicing of its units, if this warning has not been fully complied with.

Troubleshooting Bacteria Contamination

Product samples should be taken periodically by a qualified expert in order to asses the bacteria count in the product. The bacteria count in the samples should be below the figures given below:

Standard Plate Count (SPC)……..50,000
Coliform ……10

Should the bacteria counts exceed the figures listed above then there is a source of bacterial contamination. The source of contamination must be identified and corrected. High bacteria counts are indicate that a product is not safe for consumption. You must inform the machine operator on how to prevent bacterial contamination of the product.

Note: Soft serve yogurt will generally have high bacteria counts – this is normal and helps define the product. However, COLIFORM bacteria contamination is NOT ACCEPTABLE in any food product. The information given below will help prevent coliform bacteria contamination problems.

The following is a list of possible bacteria contamination sources along with methods of prevention.

SOURCE OF CONTAMINATION	PREVENTION
1 - Operator contact.	**1a -** Wash hands and forearms thoroughly. **1b -** Wear rubber gloves if cuts or skin conditions exist. **1c -** Wash hands periodically throughout the day
2 - Mix residue/deposits (milkstone build-up).	**2a -** Provide the proper brushes. **2b -** Thoroughly brush clean all parts and components to prevent the formation of milkstone, a porous substance which will house bacteria and contaminate fresh mix.
3 - Worn or damaged parts.	**3a -** Lubricate all rubber parts contacting the mix with a food grade lubricant. **3b -** Inspect o-rings for damage. Only replace with factory approved parts. **3c -** Regularly check drip troughs for excessive leakage.

SOURCE OF CONTAMINATION	PREVENTION
4 - Incorrect cleaning and sanitation procedures.	**4a -** Sink must be perfectly clean and contain enough solution to cover the biggest component. Brush clean and sanitize the freezer on a regular basis. **4b -** Use the correct brushes, lubricants, and single service towels. **4c -** Store and use chemicals as directed by the instructions on their labels. **4d -** Use a few good employees to follow the cleaning procedure correctly and consistently. Allow the employee uninterrupted time to complete the cleaning procedure. **4e -** Allow the sanitizing solution to stand in the hopper and freezing cylinder for five minutes. **4f -** Wash and sanitize the lubricant tube after each use. Always replace the cap on the tube. **4g -** Machine components and brushes should be air-dried overnight. Never store them in the storage cooler. **4h -** Always follow daily cleaning procedures. Regularly wipe down the outside of the machine and dispensing spouts with a sanitized towel.
5 - Improperly stored mix	**5a -** Use mix stock with oldest date first. Observe expiration dates. **5b -** Place the mix directly in the cooler. Do not stack mix outside or under direct sunlight before placing it in the cooler. **5c -** Always leave one inch between the mix and other products in the cooler to allow air to circulate. **5d -** Mix must not remain at room temperature for long periods of time. **5e -** Hopper storage must maintain a temperature of 40°F (4,4°C). Storage temperatures above 45°F will allow bacteria to multiply to dangerous levels in less than one hour. **5f -** Once the mix is placed in the hopper, the hopper covers must be used to maintain the correct temperature and minimize mix contamination.

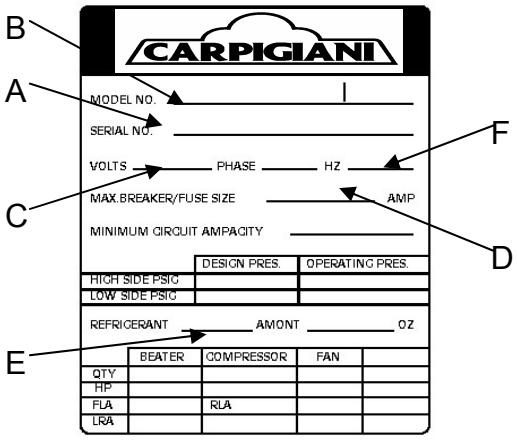
1. INTRODUCTION

1.1 GENERAL INFORMATION

1.1.1 MANUFACTURER'S IDENTIFICATION DATA

The machine has a data plate carrying manufacturer data, machine type and serial number, assigned when it is manufactured.

LEGEND:
A= Serial number
B= Machine type
C= Voltage
D= Fuss/Breaker size
E= Gas type and weight
F= Frequency



1.2 INFORMATION ABOUT THE MACHINE

1.2.1 GENERAL DATA

Electronic, self-heat-treatment, floor machine, for the production and immediate distribution of milkshake/ice cream having the following main features:

- Refrigerated upper tanks;
- Cylinder feeding pumps (to control product overrun);
- Automatic system to dispense the milkshake with a 4 flavors syrup selection;
- Two containers for hot toppings, with heating temperature control;
- Two containers for room temperature toppings;
- Automatic heat-treatment system to heat-treatment the product inside the mix tank and inside the cylinder during pause periods (for instance, during night time);
- Electronic consistency control system hard-o-matic.

1.2.2 INTENDED USE

The **K 3** machine must only be used for the production of ice cream and milkshake, within the functional limits listed below:

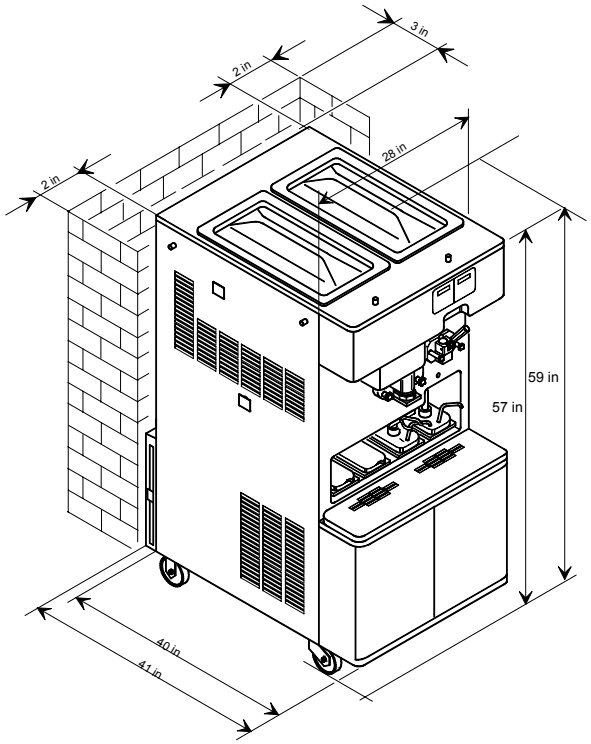
- Voltage: ±10%
- Min. ambient temperature: 50°F (10°C)
- Max. ambient temperature: 109°F (43°C)
- Max relative ambient humidity: 85%

This machine has been designed for its use in closed places not subject to explosion-proof standards; consequently, it shall be used in places complying with normal atmosphere.

1.2.3 NOISE

The continuous level of acoustic radiation pressure, which has been weighed and called A on working place, turns to be lower than 70 dB(A), both by aircooled and water-cooled units.

1.2.4 TECHNICAL FEATURES

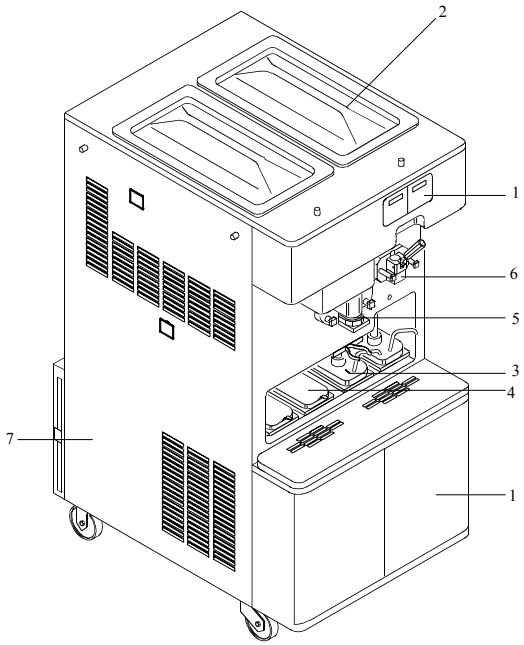


Model	Hourly Production *				Hopper capacity		Flavors		Electrical supply			Installed power	Full load	Net weight lb / kg
	SUNDAE		SHAKE		SUNDAE Gallons Liters	TTS Galons Liters	SUNDAE	SHAKE	Volt - V	Phase	Cycle - Hz	kW	Amps	
	lb /kg	3,5 oz. / 100 gr portions	lb / kg	13,5 oz. / 400 ml portions										
K 3	82 / 38	380	88 / 40	160	5,25 gal 20 l	5,25 gal 20 l	1	5	208 - 230	3	60	4,8	32	871 / 395
									380 - 415	3	50	4,8	18	

1.2.5 MACHINE ASSEMBLY IDENTIFICATION

LEGEND:

1 Syrup tanks cabinet
2 Hopper cover
3 Hot toppings
4 Room temperature toppings
5 Dispensing head shake side
6 Dispensing head soft side
7 Aircondenser



1.2.6 AUTOMATIC HEAT-TREATMENT CYCLE

The machine has been pre-set at the factory to start automatically a heat cycle every night at 2 am. (the automatic heat-treatment time can be re-set at a different time by a trained technician.

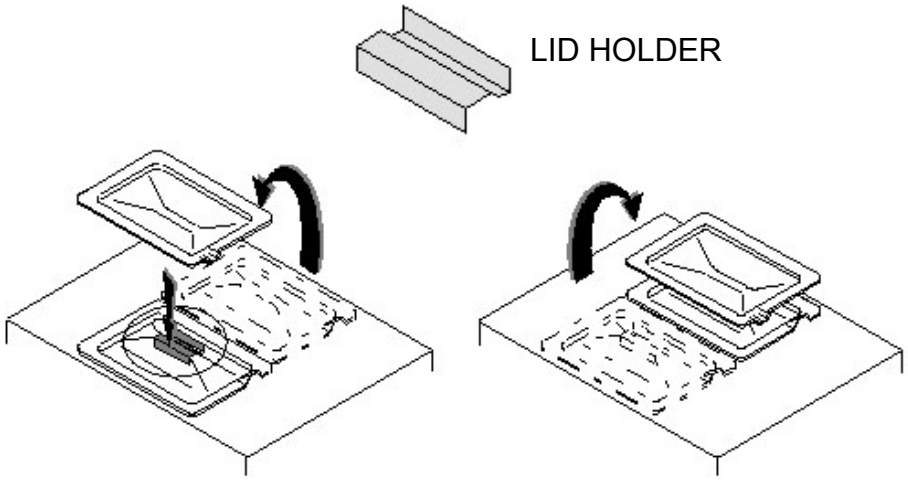
1.2.7 TEMPERATURE CONTROL

When the machine is set to STOP, the tank temperature is controlled: if it is higher or equal to 59°F (15°C), the execution of a heat-treatment program is forced. So, by pressing the PROD. button, heat-treatment program will automatically start.

NOTE:
After the machine's brush cleaning, it is necessary to push the PROD. button within 60 minutes after the front lid closing. During the 60 minutes the test at 59°F (15°C) is masked and Production is accepted. After the 60 minutes, the machine does not accept the PROD. button any more and it sets to heat-treatment function.

1.2.8 TANK LIDS HOLDER

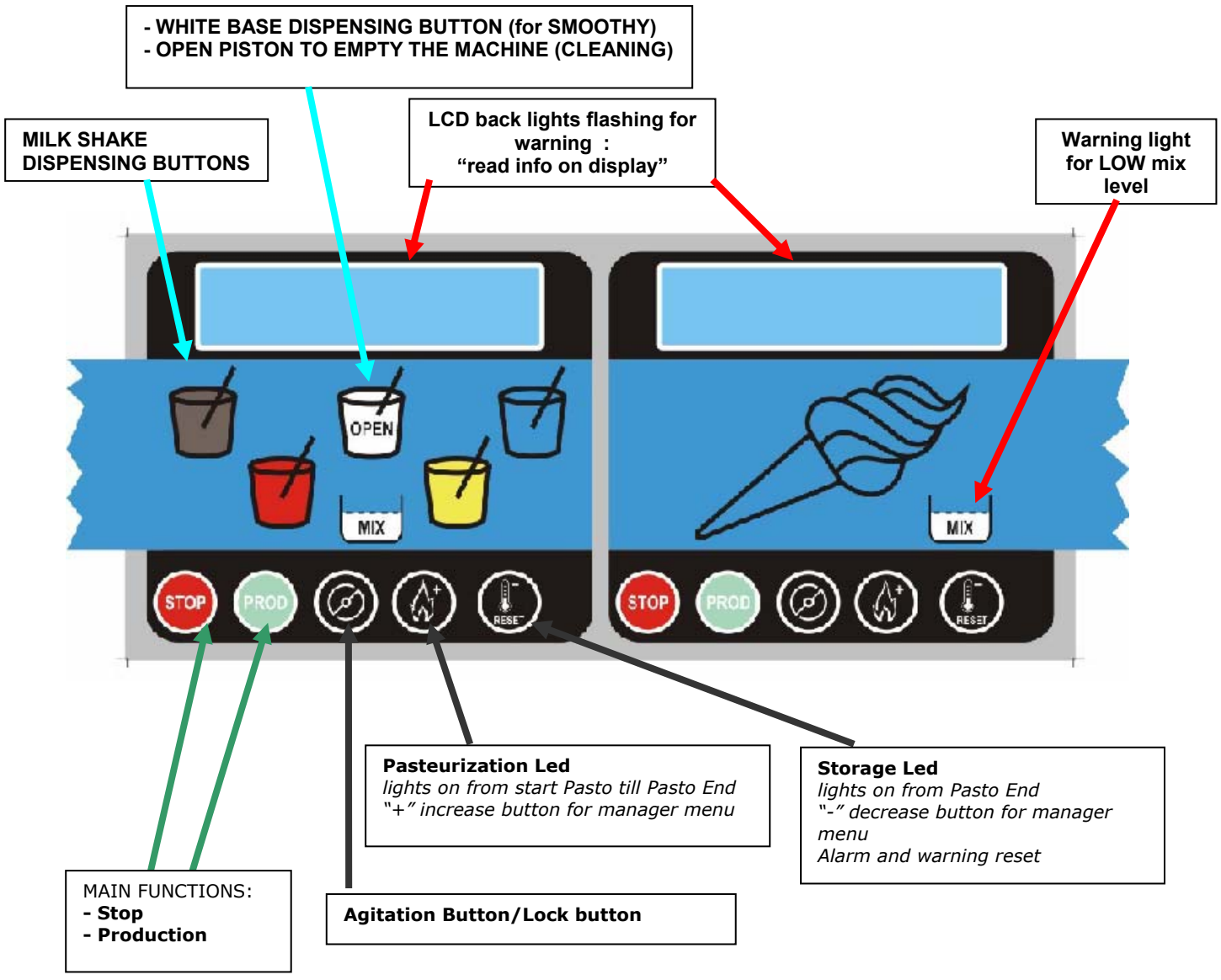
When you need to refill the mix tank, lift the lid and turn it upside down. Insert the handle of the lid in the slot of the holder placed on the other lid. You need not to remove the holder.



2. INSTRUCTIONS FOR USE

2.1 CONTROLS

The **K 3** is equipped with two front push-button panels, one for the controls related to the SHAKE side and one for the controls related to the SUNDAE side.



IMPORTANT
Push-buttons are activated keeping the finger (not the nail) pressed on it for at least 1/2 second (safety feature).

WARNING
TO REDUCE WEARING OF THE BEATER BLADE (POS. 430) USE AGITATION FUNCTION JUST FOR THE TIME STRICTLY NECESSARY.

2.1.1 MILK SHAKE FUNCTIONS

STOP BUTTON
By pressing this button during operation, the machine stops (LED on).

	DISPLAY	Comments
	10:33:21 Fri	When the machine is in STOP, the display shows Time and Date.
	10:33:21 Fri Overload Beater	In case we have an ALARM activated, the backlight of the LCD display will flash, and the display indicates the kind of ALARM.

PRODUCTION BUTTON
Preparation (startup): On pushing this button, its LED will blink 15 minutes while the machine is freezing the product. For that time, dispensing is not allowed.
Production (LED is always on): The product is ready to be dispensed and it is kept at the desired consistency by the Hard-o-Tronic system. If the machine has been in the production mode and then placed in Stop the 15 minutes start up procedure will be automatically bypassed if the time in Stop does not exceed 60 minutes; otherwise the start up procedure will be repeated.
By pressing this button from STOP, the display indicates:

KEY	DISPLAY	comments
1 PROD	Do Not Serve ! Wash in 14 days	When the ice cream or Milk Shake is not ready, the display shows: “DO NOT SERVE“
	Sundae Ready ! Wash in 14 days	When the ice cream or Milk Shake has reached the desired consistency the display shows “READY“
	Do Not Serve ! Overload Beater	In case of ALARM, this will be displayed on the second row.
2 PROD	Hopper ↓ +14ċ Cylinder ↓ +13ċ	While in Prod mode, we can go to the next page of the display by pushing PROD key. Temperatures are indicated.
3 PROD	Set=090 Hot=085	Pushing PROD again, we move to the next page showing actual consistence and the SET to be reached.
4 PROD	Cones today 1543	Pushing PROD again, we move to the next page showing the daily cone counter
5 PROD	Total Cones 123456789	Pushing PROD again, we move to the next page showing the TOTAL cones counter
6 PROD	TEV=+10 TGV=-22 TEC=+13 TE1=-12	Pushing PROD again, we move to the next page showing the temperature in the hopper, in the cylinder, ..
7 PROD	TET=+60	Pushing PROD again, we move to the next page showing the actual Topping temperature

Pushing PROD again, we move to the next page that is the first page.

AGITATION BUTTON

By pressing this button from STOP, the led turns on and the display indicates:

KEY	DISPLAY	Comments
1	TEV=+13 TEC=+13	Pushing one time this button, the beater motor and the mix pump motor will turn ON.
2	TEV=+13 TEC=+13 Beater Motor OFF	Pushing a second time this button, the beater motor will SOP whereas the mix pump remains ON.

LOCK BUTTON

To clean the keyboard panel with a clean towel it is recommended to block the keys of the keyboard as follows:

Push for 3 seconds button, the respective led will flash indicating that the keyboard is blocked. At this stage you can clean the keyboard without any risk. To reactivate the keyboard push for 3 seconds button, the led will get off.

HEAT-TREATMENT FUNCTION / INCREASE FUNCTION

The heat-treatment function can be activated only if the mix in the hopper is above the Medium Level ("ADD MIX" message on display must be off).

AUTOMATIC HEAT-TREATMENT CYCLE: while the machine is in production (SHAKE LED on) and the mix is above the medium level, the heat-treatment cycle starts automatically at a certain time (as programmed in the Manager Menu normally at 2:00 AM).

During the display indicates "HEAT-TREATMENT CYCLE" the mix in the hopper and in the cylinder is heated up to 65°C, kept at 65°C for 30 minutes and finally cooled down to 2°C.

At the end of the cycle, the display shows **"PASTO END"** followed by date and hour of termination. The machine passes automatically to STORAGE function.

To serve shake, press STOP then the PROD button.

Note: Once the heat treatment cycle has started, it can not be interrupted. The complete heat-treatment cycle will take less than 4 hours to be completed.

During the heating and Pause cycles, the mix in the machine is very hot. Do not attempt to draw mix or disassemble the machine.

STORAGE / DECREASE FUNCTION / RESET ALARM MESSAGES

The Storage led lights ON as soon as the Pasteurisation cycle ends. The machine preserves the mix at +2°C (35°F) in the hopper and in the cylinder.

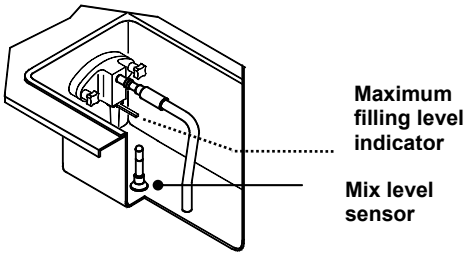
- this button is used to decrease the value in the manager menu
- this button is also used to RESET the ALARM MESSAGES on the display.

MIX LEVEL SIGNAL

In each hopper we have 2 level sensors: MEDIUM level and LOW level.

- When the MIX LEVEL LED flashes, it means that the mix level in the hopper is lower than the medium mix level sensor.
- When the MIX LEVEL LED is on, it means that the mix level in the hopper is lower than the minimum mix level sensor.

The display indicates ADD MIX or MIX OUT



When the LCD back light is blinking, that means an alarm has tripped.
When it becomes solid, the alarm which has previously tripped, has automatically reset and the indication on the display must be reset by pressing RESET button

.

MILK SHAKE DISPENSING BUTTONS

Every “coloured cup” button corresponds to a milk shake flavour.

In PRODUCTION, the product is dispensed according to the flavor selected.
If, while dispensing milk shake, you push any “coloured cup” button, the milk shake will immediately stop without reaching its automatic level; such a function can be used to dispense small portions to try out.

In **STOP** by pushing the button

the piston opens and remains opened; by pushing again it closes.
In **STOP** The “coloured cup” button are used for syrup calibration.

SYRUP QUANTITY CHECK and SYRUP SYSTEM CLEANING

While the machine is in **STOP**:

- Push one time a “coloured cup” button
- The respective peristaltic pump will run for 5 or 7 sec.
- Check the quantity of the syrup using the calibration cup.

- If the quantity of syrup is not satisfactory then modify the calibration as explained in the manager menu.
- By pushing a second time while the syrup pump is ON, the pump will run at MAX speed in order to flush and clean the syrup tubes.

MANAGER MENU

1) To access the Manager Menu push simultaneously both keys

and

then release immediately.

On the display you will read the first step of the Manager Menu:

	Step U01 Hour 10

The first row indicates the step number, and the second row indicates the description and value.

2) Push or

in order to increase or decrease the value.
3) Push STOP to move to the next step.
4) To exit the Manager Menu push button.

The following table illustrates all the steps of the manager menu:

STEP N° (first row)	Display (second row)	Min	Max	**Default**
U01	Hour	00	23	**To be adjusted**
U02	Minutes	00	59	**To be adjusted**
U03	Day of Week	SUN	SAT	**To be adjusted**
U04	Day of Month	01	31	**To be adjusted**
U05	Month	01	12	**To be adjusted**
U06	Year	2000	2099	**To be adjusted**
U07	Language	ITA	ENG	**ENG**
U08	Start Pasto Hour	00	23+no	**02**
U09	Start Distr.Hour	00	23+no	**08**
U10	Beeper	00	01	**01**
U11	Syrup 1 pump speed			
U12	Syrup 2 pump speed			
U13	Syrup 3 pump speed			
U14	Syrup 4 pump speed			

- Time and date adjustment
- Language selection
- Start Pasteurisation time
- Start Production time
- Disable/enable the audible alarm when mix level is low.
- Syrup pumps speed to calibrate the syrup quantity (1 oz fluid ounce in 5 or 7 sec)

2.1.2 SUNDAE FUNCTIONS

STOP BUTTON
By pressing this push-button during operation, the machine stops (LED on).

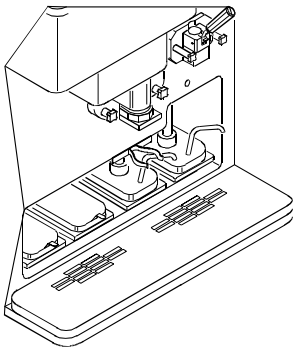
	DISPLAY	Comments
	10:33:21 Fri	When the machine is in STOP, the display shows Time and Date.
	10:33:21 Fri Overload Beater	In case we have an ALARM activated, the backlight of the LCD display will flash, and the display indicates the kind of ALARM.

PRODUCTION BUTTON
Press PROD button to start the production mode (LED on). The motor and compressor are automatically controlled by HARD-O-TRONIC system.

By pressing this button from STOP, the display indicates:

KEY	DISPLAY	comments
1 PROD	Do Not Serve ! Wash in 14 days	When the sundae is not ready, the display shows: “DO NOT SERVE“
	Sundae Ready ! Wash in 14 days	When the sundae has reached the desired consistency the display shows “READY“
	Do Not Serve ! Overload Beater	In case of ALARM, this will be displayed on the second row.
2 PROD	Hopper ↓ +14ċ Cylinder ↓ +13ċ	While in Prod mode, we can go to the next page of the display by pushing PROD key. Temperatures are indicated.
3 PROD	Set=090 Hot=085	Pushing PROD again, we move to the next page showing actual consistence and the SET to be reached.
4 PROD	Cones today 1543	Pushing PROD again, we move to the next page showing the daily cone counter
5 PROD	Total Cones 123456789	Pushing PROD again, we move to the next page showing the TOTAL cones counter
6 PROD	TEV=+10 TGV=-22 TEC=+13 TE1=-12	Pushing PROD again, we move to the next page showing the temperature in the hopper, in the cylinder, ..
7 PROD	TET=+60	Pushing PROD again, we move to the next page showing the actual Topping temperature

Pushing PROD again, we move to the next page that is the first page.



TOPPING HEATER
In PROD. function the two hot topping containers are heated automatically to reach the desired temperature. In case the water level in the bainmarie is too low the display will indicate an alarm in order to refill with water.

AGITATION BUTTON

By pressing this button from STOP, the led turns on. The beater and the mix pump motor get ON until you press STOP or after 3 minutes. The display indicates:

KEY	DISPLAY	comments
1	TEV=+13 TEC=+13	**Pushing one time this button**, the beater motor and the mix pump motor will turn ON.
2	TEV=+13 TEC=+13 Beater Motor OFF	**Pushing a second time this button**, the beater motor will STOP whereas the mix pump remains ON.

LOCK BUTTON

To clean the keyboard panel with a clean towel it is recommended to block the keys of the keyboard as follows:

Push for 3 seconds button, the respective led will flash indicating that the keyboard is blocked. At this stage you can clean the keyboard without any risk. To reactivate the keyboard push for 3 seconds button, the led will get off.

HEAT-TREATMENT FUNCTION / INCREASE FUNCTION
The heat-treatment function can be activated only if the mix in the hopper is above the Medium Level ("ADD MIX" message on display must be off).
AUTOMATIC HEAT-TREATMENT CYCLE: while the machine is in production (SHAKE LED on) and the mix is above the medium level, the heat-treatment cycle starts automatically at a certain time (as programmed in the Manager Menu normally at 2:00 AM).
During the display indicates "HEAT-TREATMENT CYCLE" the mix in the hopper and in the cylinder is heated up to 65°C, kept at 65°C for 30 minutes and finally cooled down to 2°C.
At the end of the cycle, the display shows **"PASTO END"** followed by date and hour of termination. The machine passes automatically to STORAGE function.
To serve shake, press STOP then the PROD button.

Note: Once the heat treatment cycle has started, it can not be interrupted. The complete heat-treatment cycle will take less than 4 hours to be completed.

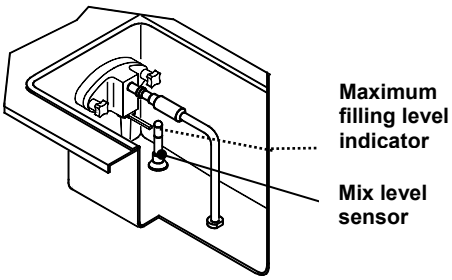
During the heating and Pause cycles, the mix in the machine is very hot. Do not attempt to draw mix or disassemble the machine.

WARNING
Do not draw sundae or disassemble the machine during the heat-treatment because the product is very hot and under pressure.

STORAGE / DECREASE FUNCTION / RESET ALARM MESSAGES
The Storage Led lights ON as soon as the Pasteurisation cycle ends. The machine preserves the mix at +2°C (35°F) in the hopper and in the cylinder.
- this button is used to decrease the value in the manager menu
- this button is also used to RESET the ALARM MESSAGES on the display.

MIX LEVEL SIGNAL
In each hopper we have 2 level sensors: MEDIUM level and LOW level.
- When the MIX LEVEL LED flashes, it means that the mix level in the hopper is lower than the medium mix level sensor.
- When the MIX LEVEL LED is on, it means that the mix level in the hopper is lower than the minimum mix level sensor.

The display indicates ADD MIX or MIX OUT



When the LCD back light is blinking, that means an alarm has tripped.
When it becomes solid, the alarm which has previously tripped, has automatically reset and the indication on the display must be reset by pressing RESET button

.

2.2 EVENTS

In order to read the events, the machine should be in STOP then push

until ****READ EVENTS**** is displayed.

	02:00:00 06 APR START PASTEUR	

The first event will appear on the display. Push or

in order to scroll UP or DOWN the events list.

Push

to exit the events reading and go to STOP.

2.3 MANAGER MENU

5) To access the Manager Menu push simultaneously both keys

and

then release immediately.

On the display you will read the first step of the Manager Menu:

	Step U01 Hour 10

The first row indicates the step number, and the second row indicates the description and value.

6) Push or

in order to increase or decrease the value.
7) Push STOP to move to the next step.
8) To exit the Manager Menu push AGITATION key

The following table illustrates all the steps of the manager menu:

STEP N° (first row)	Display (second row)	Min	Max	**Default**
U01	Hour	00	23	**To be adjusted**
U02	Minutes	00	59	**To be adjusted**
U03	Day of Week	SUN	SAT	**To be adjusted**
U04	Day of Month	01	31	**To be adjusted**
U05	Month	01	12	**To be adjusted**
U06	Year	2000	2099	**To be adjusted**
U07	Language	ITA	ENG	**ENG**
U08	Start Pasto Hour	00	23+no	**02**
U09	Start Distr.Hour	00	23+no	**08**
U10	Beeper	00	01	**01**

- Time and date adjustment
- Language selection
- Start Pasteurisation time
- Start Production time
- Disable/enable the audible alarm when mix level is low.

THE MACHINE IS READY FOR START-UP ONLY AFTER IT HAS BEEN PERFECTLY CLEANED AND SANITIZED.

FOR HYGIENIC AND SAFETY REASONS, HANDS SHOULD NEVER BE PLACED INSIDE THE MIX TANK DURING THE MACHINE OPERATION.

2.4 OPERATION

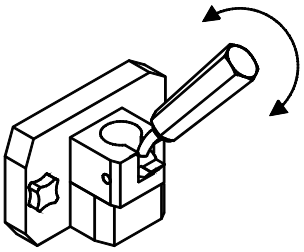
2.4.1 DISPENSING MILK SHAKE

- Once the milk shake has completed the freezing cycle and the LED is on solid, place a cup on the cup holder and press one of the "coloured cup" buttons (brown, red, yellow or blue) in order to dispense milk shake.
- The machine automatically dispenses the milk shake in the cup, placed on the cup holder, up to the level set by the sensor.
- **The dispensing may be stopped at anytime by pressing any of the "coloured cup" buttons.**

WARNING
It is important to keep the sensor clean and to use a fresh clean cup of the recommended type.
The cup seal must always face away from the sensor.

2.4.2 DISPENSING SUNDAE

In order to dispense sundae, place a cup or a cone under the spout and slowly pull down the dispensing handle. As soon as the sundae comes out, twist the cup or the cone to form a cone-shaped serving.
When the portion has reached the desired size, close the dispensing handle and quickly pull the cone or the cup down in order to sharpen the tip.



2.5 PROGRAMMED CLEANING CYCLE

The machine is equipped with an **automatic system** that calls for washing of the parts in contact with the product at least **every 14 days**.

In PROD. the second row of the display indicates the days remaining to the next cleaning.

```
Sundae Ready !
Wash in 14days
```

2.6 POWER FAILURE

In the event of a black-out with the machine in:

- AGITATION
- HEAT-TREATMENT (HEATING or PAUSE stage)

the machine will resume operating in the same function where it was when the power went off.

If the machine was in one of the following functions:

- STORAGE
- PRODUCTION
- HEAT-TREATMENT (COOLING stage)

upon the return of power, the temperature at the time of failure and the duration of the black-out will be automatically checked and the machine will resume operating in the same function or it will start a new HEAT-TREATMENT cycle, in accordance with the applicable safety standards:

CAUTION
If a blackout exceeds four hours, it is always necessary, to avoid health hazards in the dispensed product, to disassemble, to wash, to rinse and to sanitize the parts as indicated in Section 4 of this manual.

3. DAILY CLOSING PROCEDURES

3.1 MILK SHAKE SIDE

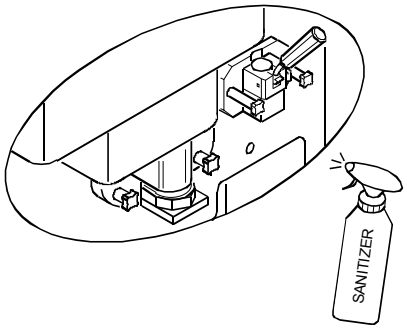
Make sure your hands are clean and sanitized before performing the following procedures.

3.1.1 DISASSEMBLING AND CLEANING THE COMPONENTS:

Remove cup holder, drip tray and drip trough to wash, rinse, sanitize at the sink and replace them on the machine.

3.1.2 SANITIZING THE DOOR AREA:

a) Fill an empty pail with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gallons (9-1/2 liters) of water = 100 PPM] (and mix the powder).
b) Return to the machine with a small amount of McD sanitizer solution in a pail.
c) Dip the door spout brush in the pail of sanitizer and brush clean several times the dispensing spout area and the spinner plate.
d) Spray the spigot area and spigot spout with sanitizer.
e) Using a clean, sanitized towel, wipe the freezer door, front panel the area around the freezer door and any other areas that demonstrate a build up of either moisture or food splashed.



3.1.3 SYRUP LINE CLEANING / SANITIZING

Wiping pick up tubes:

a) Remove the syrup pick up tubes from the syrup jugs or disconnect the syrup connectors from the bags,
b) Wipe the outside of the pick up tubes/syrup connectors with a clean, sanitized towel.
c) Remove the syrup jugs/syrup bags from the cabinet.

Sanitizing the syrup lines:

a) Fill an empty pail with McD sanitizer prepared in water 122-140°F (50-60°C) [1 packet in 2-1/2 gallons (9-1/2 liters) of water = 100 PPM] (and mix the powder).
b) Place the pick up tubes inside. Push STOP button, then the corresponding “coloured cup” button two times to run the syrup pump at maximum speed and let the sanitizing solution flow for 1 minute. Press STOP button to stop the syrup pump.
c) Repeat for all syrup lines.
d) Keep the pick up tubes in the pail containing the sanitizing solution.
e) The machine is in STOP function, **push PROD button**.

ATTENTION

Make sure that you don’t keep the machine in STOP; in fact the machine will show on the display the message “WHY IN STOP?” in order to remind you to push PROD button as soon as you finish the syrup cleaning procedure.

3.1.4 PREPARING THE MACHINE FOR THE OVERNIGHT HEAT TREATMENT CYCLE.

a) Open the hopper cover to verify the mix level.
b) Fill the hopper with McD shake mix to the Max level. The “ADD MIX” message on the display should be off.
c) Keep the machine in PROD mode.

WARNING

If the mix in the hopper is below the medium level ("ADD MIX" MESSAGE ON DISPLAY), the heat-treatment cycle will not start.

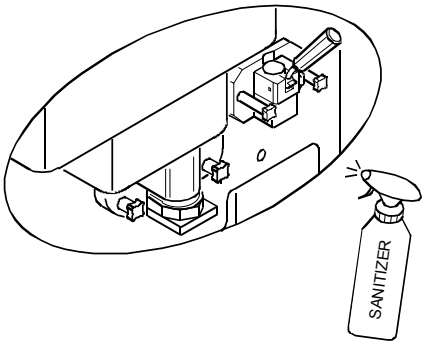
NOTE:

To clean the keyboard panel with a clean towel it is recommended to block the keys of the keyboard as follows:

Push for 3 seconds *button, the respective led will flash indicating that the keyboard is blocked. At this stage you can clean the keyboard without any risk .To reactivate the keyboard push for 3 seconds* *button, the led will get off.*

3.2 SUNDAE SIDE

Make sure your hands are clean and sanitized before performing the following procedures.



3.2.1 SANITIZE THE DOOR AREA:

a) Fill an empty pail with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gallons (9-1/2 liters) of water = 100 PPM] (and mix the powder).
b) Return to the machine with a small amount of McD sanitizer solution in a pail.
c) Dip the door spout brush in the pail of sanitizer and brush clean the dispensing spout.
d) Spray the spigot area and spigot spout with sanitizer.
e) Wipe exterior of machine with clean sanitized towel.

3.2.2 PREPARE THE MACHINE FOR THE OVERNIGHT HEAT TREATMENT CYCLE.

a) Open the hopper cover to verify the mix level.
b) Fill the hopper with McD sundae mix to the Max level. The “ADD MIX” message on the display should be off.
c) Keep the machine in “PROD.” mode.

WARNING
If the mix in the hopper is below the medium level ("ADD MIX" message on the display), the heat-treatment cycle will not start.

NOTE:
To clean the keyboard panel with a clean towel it is recommended to block the keys of the keyboard as follows:

Push for 3 seconds *button, the respective led will flash indicating that the keyboard is blocked. At this stage you can clean the keyboard without any risk. To reactivate the keyboard push for 3 seconds* *button, the led will get off.*

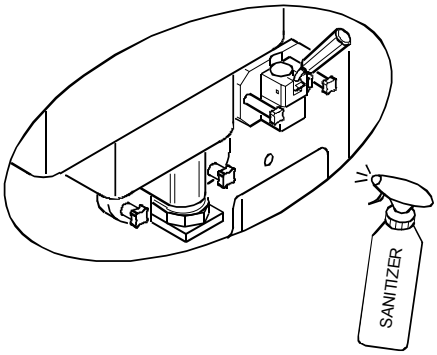
4. DAILY OPENING PROCEDURES

- Check that heat-treatment cycle has been successfully completed and the display indicates the message "PASTO END", followed by the time and day of completion.
- If the heat-treatment cycle was not successfully completed the machine will be locked out. Check the reason by reading the alarm messages and press

in order to reset the message on the display. Press STOP then PROD. button to run a manual heat-treatment cycle. If the heat treatment cycle is successfully completed, the lock out resets automatically and the machine is ready to go in production. No product can be dispensed during the heat cycle (approximately three hours).

4.1 MILK SHAKE SIDE

Make sure your hands are clean and sanitized before performing the following procedures.



4.1.1 SANITIZE THE DOOR AREA:

a) Fill an empty pail with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gallons (9-1/2 liters) of water = 100 PPM] (and mix the powder).
b) Dip the door spout brush in the pail of sanitizer and brush clean several times the dispensing spout area and the spinner plate.
c) Spray the spigot area and spigot spout with sanitizer.
d) Wipe exterior of machine with clean sanitized towel.

4.1.2 REMOVING THE SANITIZING SOLUTION FROM SYRUP LINES

a) Remove the pick up tubes from the pail containing the sanitizing solution and put them on a clean towel in the cabinet.
b) The machine is in STORAGE function, push STOP
c) Push the corresponding “coloured cup” button two times to run the syrup pumps at maximum speed in order to empty the tube from the remaining sanitizing solution
d) Press STOP button to stop the syrup pump
e) Repeat for all syrup lines

4.1.3 PRIMING THE SYRUP LINES WITH SYRUP

a) Place each pick up tube in its syrup jug or connect the syrup connector to the syrup bag.
b) Place empty bucket under the spout.
c) Press “coloured cup” button two times until the syrup is dispensed, discard this sample.
d) Press STOP button to stop the syrup pump.
e) Repeat for all syrup flavors.
f) Using a clean, sanitized towel, wipe the door cabinet.

4.1.4 START THE MACHINE:

The machine is in STOP function. Push PROD button in order to start the machine. The LED will flash and the shake freezing process is carried out for 15 minutes. **During this time, you CANNOT dispense Milk Shake.** When “PROD” LED stays solid, Milk Shake is ready to serve.

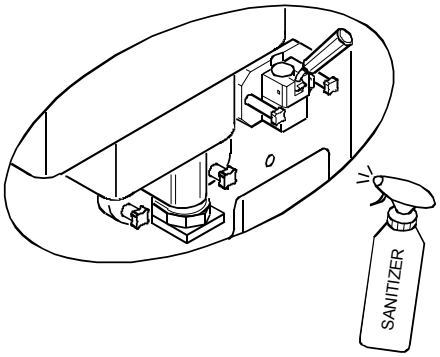
WARNING

Do not keep a syrup line empty. In case you are using only 3 syrup flavours, you should close the hole of the front lid using the tap delivered with the accessories as indicated in sect. 6.4.2.1

4.2 SUNDAE SIDE

Make sure your hands are clean and sanitized before performing the following procedures.

4.2.1 SANITIZE THE DOOR AREA:



a) Fill an empty pail with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gallons (9-1/2 liters) of water = 100 PPM] (and mix the powder).
b) Return to the machine with a small amount of McD sanitizer solution in a pail.
c) Dip the door spout brush in the pail of sanitizer and brush clean the dispensing spout.
d) Spray the spigot area and spigot spout with sanitizer.
e) Wipe exterior of machine with clean sanitized towel.

4.2.2 PREPARING THE HOT TOPPING

a) Remove the topping containers and check the water level. Refill hot topping bainmarie with water to reach the level indicated. A level sensor is placed inside the hopper; when the water level is low, an alarm appears on the display until the proper level is restored.
b) Refill sundae toppings in the bin as needed.
c) Replace the topping covers and pumps in the heated topping well.
d) As soon as the machine is in PROD. and the water level is satisfied the topping heaters will be automatically on.

4.2.3 START THE MACHINE:

The machine is in STORAGE function. Push STOP then push PROD buttons in order to start the machine. Within few minutes the Sundae is ready to serve.

WEEKLY CLEANING

On a weekly basis, certain machine parts must be disassembled, washed, sanitized and re-assembled. The following is the list of operations to be performed weekly in addition to the regular daily cleaning procedure.

Make sure your hands are clean and sanitized before performing the following procedures.

5.1 WASHING AND SANITIZING OF THE TOPPING CONTAINERS

5.1.1 CLEANING THE TOPPING BINS:

a) Remove the topping pumps and bins from the machine and take them to back sink.
b) Discard the toppings weekly to break the bacterial cycle.
c) Wash the bins thoroughly with the McD All Purpose Super Concentrate (APSC) and hot water 122-140°F (50-60°C) (or with of hot McD APSC from the KayStar dispenser at the back sink), eliminating any product residue.
d) Place the bins into the McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM] for 1 minute.
e) Make sure that the bins are empty and leave them out to air-dry.

5.1.2 CLEANING THE TOPPING HOPPER

a) Place an empty container under the drain tap inside the syrup cabinet.
b) Open the tap and drain the water completely from the topping hopper. (caution: water is hot)
c) Close the tap.

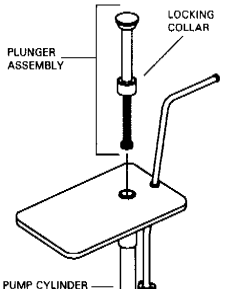
5.2 DISASSEMBLING, WASHING AND SANITIZING OF THE HOT TOPPING PUMPS

Clean the hot-topping pumps:

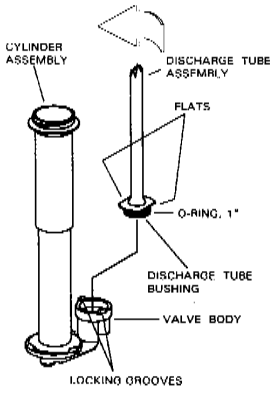
Place the lower end of the pump into a container of clean warm water and operate the pump until the water being discharged is clear.

- **DISASSEMBLY**

step 1
Loosen the locking collar until the plunger assembly can be removed from the pump cylinder.
NOTE
The plunger spring is slightly compressed so use care when removing the knob.



step 2
Remove the discharge tube assembly by rotating it counterclockwise until the flats on the discharge tube bushing clears the valve body locking grooves, then carefully pull the discharge tube assembly from the valve body.
step 3
Separate the O-ring from the discharge tube bushing by squeezing on the O-ring and sliding it in the bushing groove until the O-ring can be rolled out from the groove.
step 4
Remove the cylinder assembly from the valve body by applying down pressure on the cylinder assembly while rotating it counterclockwise direction until the tabs of the cylinder assembly clear the locking grooves on the valve body.
step 5
Remove the O-ring from the valve body.
step 6
Place all parts in a clean container.



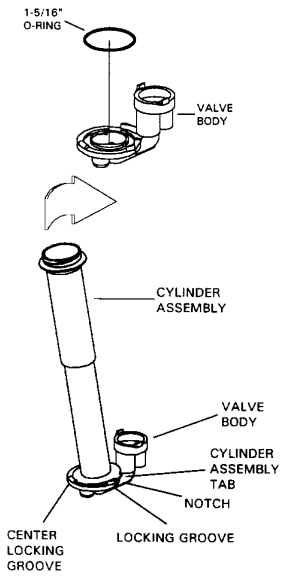
- **WASHING**

NOTE
DO NOT use tools that can scratch polished surfaces. Do use clean and sanitized brushes.

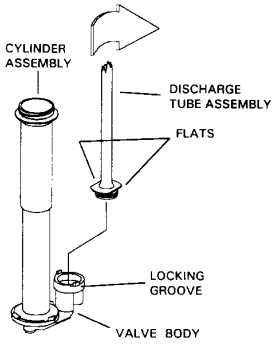
step 1
Wash all pump components in the McD All Purpose Super Concentrate (APSC) and hot water 122-140°F (50-60°C) (or with hot McD APSC from the KayStar dispenser at the back sink).
step 2
Rinse them with clear water. Use the supplied brushes to clean the discharge tube assembly and the valve body. It is recommended that the small parts be washed in a pan or other container so they will not be lost.
step 3
Sanitize the pump components immerging them in a container with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM] (and mix the powder)] and waiting for 1 minute.
step 4
Allow the pump parts to air-dry after sanitizing.

- **REASSEMBLY**

step 1
Lubricate and position the knob O-ring in its groove on the knob. Set the knob aside.
step 2
Assemble the washer, the spring, the head insert, and the head tube on the piston and stem assembly.
step 3
Slip the gaging collars (if they are used) onto the head tube, then place the locking collar on the head tube.



step 4
Hold onto the head tube and push the piston and stem assembly into the head tube, compressing the spring. When the threaded end of the stem projects through the head tube, thread the knob onto the piston and stem assembly.
step 5
Set the assembled plunger assembly aside.
step 6
Lubricate the O-ring with approved lubricant and install the O-ring in its groove on the discharge tube assembly bushing. Temporarily set the discharge tube assembly aside.
step 7
Lubricate the O-ring with food grade lubricant and install the O-ring in its groove in the valve body.
step 8
Align the tabs on the cylinder flange with the notches in the valve body. Tilt the cylinder assembly slightly and slide the widest section of the flange under the center locking groove of the valve body. Rotate the cylinder assembly clockwise while applying down pressure on the cylinder assembly until the flange tabs fully engage the locking grooves of the valve body.
step 9
Position the discharge tube assembly on the valve body, aligning the flats on the discharge tube assembly bushing with the locking tabs on the valve body. Push down on the discharge tube assembly until it is seated. Rotate the discharge tube assembly clockwise to lock it in place.



step 10
Slide the lid onto the discharge tube assembly and the cylinder assembly and secure the lid with the discharge tube nut.
step 11
Apply food grade lubricant to the discharge fitting O-ring and install the O-ring on the discharge tube fitting. Install the fitting in the discharge tube by pushing the fitting into the discharge tube and rotating it in a clockwise direction.
step 12
Apply a small amount of food grade lubricant to the seal flare, install the plunger assembly in the pump body assembly, and tighten the locking collar.

5.3 CHECK TOPPING PUMP TEMPERATURE AND VOLUME

NOTE: *This procedure should be performed on a morning after the pumps were disassembled and cleaned.*

Step 1
Dispense one serving of topping into a sundae cup. Discard this sample.
Step 2
Dispense second serving into a sundae cup.
Step 3
Insert the digital thermometer into the topping. Let the digital thermometer stabilize for 20 seconds.

NOTE*: Topping temperature should be between 115° and 125°F (46° and 52°C) and must be this temperature before the pump calibration can begin. Water bath temperature should be between 135° and 145°F (57° and 63°C).*

Step 4
If the temperature is too cold or too warm, call service to adjust.
Step 5
Hold the small chamber of the calibrating cup under the dispensing nozzle.
Step 6
Push the dispensing lever down for one full stroke. The topping should be directed to the bottom of the calibrating cup. Do not allow the topping to fall on the sides of the cup.

NOTE*: The amount of dispensed topping should be one fluid ounce (29.6 ml).*

Step 7
If the amount of dispensed topping is not correct, consult the troubleshooting section of your equipment manual.
Step 8
Repeat for the other topping pump.

6. EVERY 14 DAYS CLEANING

After exactly 14 DAYS from the last brush cleaning, the machine must be thoroughly washed and restarted. It automatically locks out and must be disassembled, washed, sanitized and reassembled before operations can resume. Every time product is dispensed the display indicates the number of days to the next brush cleaning.
The following is the list of operations to be performed on the 14th day in addition to the regular daily and weekly cleaning procedure.

NOTICE
MAKE SURE YOUR HANDS ARE CLEAN AND SANITIZED

6.1 DISASSEMBLING AND CLEANING THE MILK SHAKE SIDE

NOTICE
ALL PARTS REMOVED FROM THE MACHINE SHOULD BE PLACED INTO A CONTAINER, AND TRASPORTED TO THE SINK FOR CLEANING, RINSING AND SANITIZING

6.1.1 CLEANING THE SHAKE SYRUP SYSTEM

Wiping pick up tubes:

a) Remove the syrup pick up tubes from the syrup jugs or disconnect the syrup connector from the syrup bag.
b) Wipe the outside of the pick up tubes with a clean, sanitized towel. Remove the syrup jugs/syrup bags from the syrup compartment.

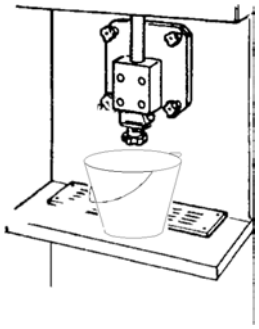
Cleaning the syrup lines:

a) Remove the cup holder and place an empty pail under the door spout
b) Fill a pail with the *McD All Purpose Super Concentrate* (APSC) and hot water 122-140°F (50-60°C) (or refill a pail of hot McD APSC from the KayStar dispenser at the back sink).
c) Place the pick up tubes inside. Press STOP then push the corresponding “coloured cup” button two times to run the syrup pump at maximum speed and let the water flow for 1 minute. Press STOP button to stop the syrup pump.
d) Repeat for all syrup lines.

Rinsing the syrup lines:

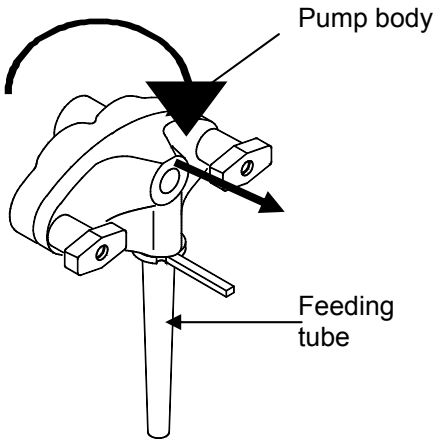
a) Fill a pail with tap water and place the pick up tubes inside. Push the corresponding “coloured cup” button two time and let the water flow for 1 minute. Press STOP button to stop the syrup pump.
b) Repeat for all syrup lines.

6.1.2 DRAINING AND CLEANING THE MILK SHAKE SIDE



WARNING
Every time the display shows "WASH TODAY" alarm, you have to push once the RESET button in order to reset the alarm message.

Drain the Milk Shake
step 1
Put an empty pail under dispensing spout.
step 2
Push the "STOP" button.
step 3
Push the OPEN button then push button to allow the milk shake to flow out until it becomes liquid.
step 4
Push the "STOP" button to close the piston, stop the beater motor and the mix pump.
step 5
Remove the pressure tube:
In the hopper, disconnect the pressure tube from the pump, turn it sideways and remove it by pulling it up from its seat.
Remove the mix pump:
Grasp the pump and turn it in a clockwise direction of 45° then pull it out towards you. Make sure that the pump drive shaft and seal are taken out with the pump.
Remove the mix agitator:
Remove the agitator from the hopper by pulling it upwards.
step 6
Push the OPEN button in order to open the piston and drain the rest of the liquid mix.
step 7
Use the OPEN button to open and close the piston when necessary while still in STOP. Drain the hopper completely. To close the piston, press the "STOP" button.
step 8
Rinse the machine
Pour 2,5 gallons (9.5 liters) of cool, clean water into the mix hopper.
Use the white hopper brush to scrub the mix hopper, mix level sensor and the outside the agitator shaft.
Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.



step 9
Drain rinse water from hopper and cylinder
Place an empty pail under the milk shake spout.

Push the

button to open the spigot piston and let the water drain out. Press the button and let the beater run for about 10 seconds. Press the “STOP” button to stop the beater; the piston closes automatically.

Push the

button to open the spigot piston and let the water flow completely out.
Repeat steps 8 and 9 until the rinse water being dispensed is clear.
step 10
Clean the machine
Fill the tank with 2-1/2 gallons (9-1/2 liters) of warm water APSC solution.

step 11

Press the button and let the beater run for about 10 seconds.
step 12
Push the “STOP” button.
step 13
Use the white hopper brush to scrub the mix hopper, mix level sensor and the outside the agitator shaft.
Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.
step 14

Push the

button and let the liquid flow completely out.
step 15
Then push the “STOP” button to close the piston.
step 16
Rinse the machine

Rinse with clear water, push the

button and let the water flow completely out. Press the “STOP” button to close the piston.
step 17
Sanitize the machine
Fill the hopper with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM].
step 18

Press the button and let the beater run for 10 seconds then push STOP.
Use the white hopper brush to scrub the mix hopper, mix level sensor and the outside the agitator shaft.
Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.
step 19
Leave the solution of McD Sanitizer for a minimum of 1 minute.
step 20

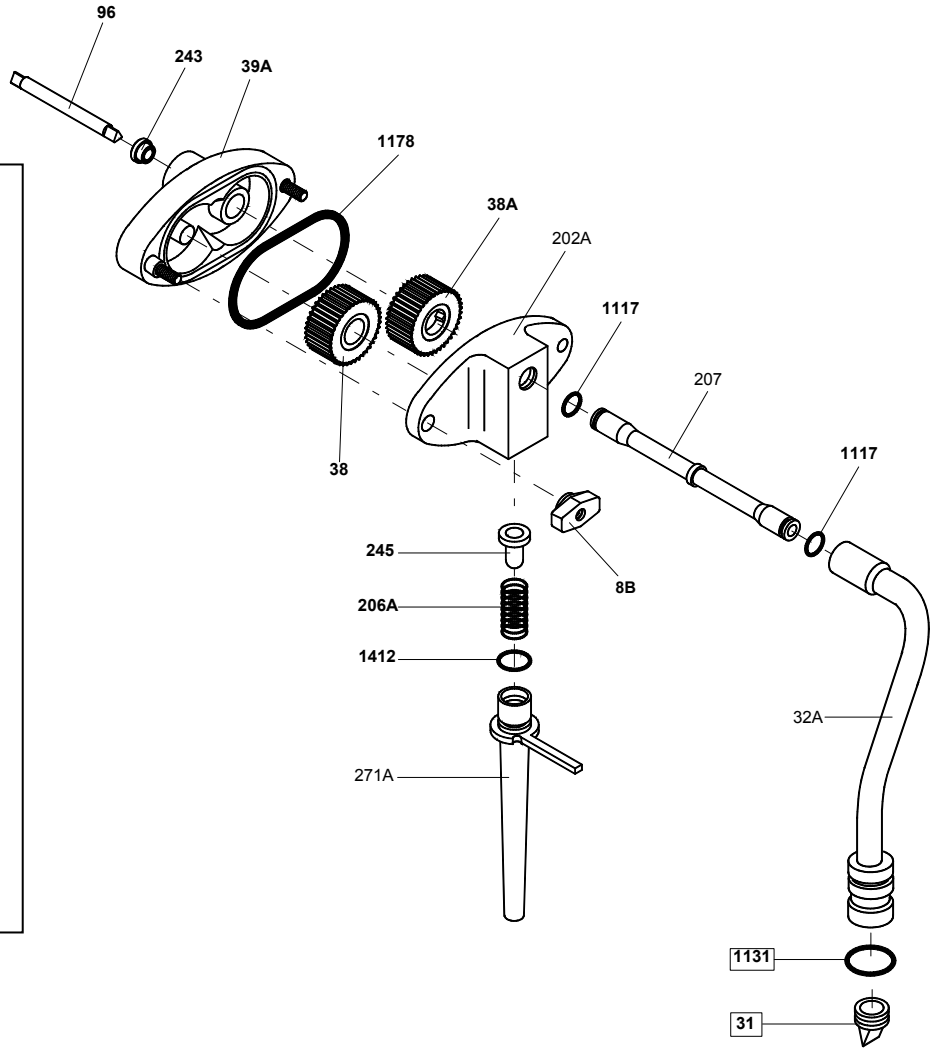
Push the “

” button and let the sanitizer flow completely out.
step 21
Push the “STOP” button.

6.1.3 DISASSEMBLING OF THE SHAKE MIX PUMP

step 1
Remove the pump drive shaft and seal from the pump.
step 2
By holding the feeding tube (#271A) upwards turn it counter-clockwise and pull it out.

Pos.	Description
8B	Hand screws
31	Check valve-slit
32A	Pressure pipe
38	Driving gear
38A	Driven gear
39A	Pump body
96	Pump shaft
100	Shake chamber tube
202A	Pump housing
206	Spring
207	Connection tube
271A	Feeding tube
243	Seal-mix pump shaft
245	Pressure relief valve
1104	O-ring
1117	O-ring
1131	O-ring
1178	O-ring
1412	O-ring
1416	O-ring

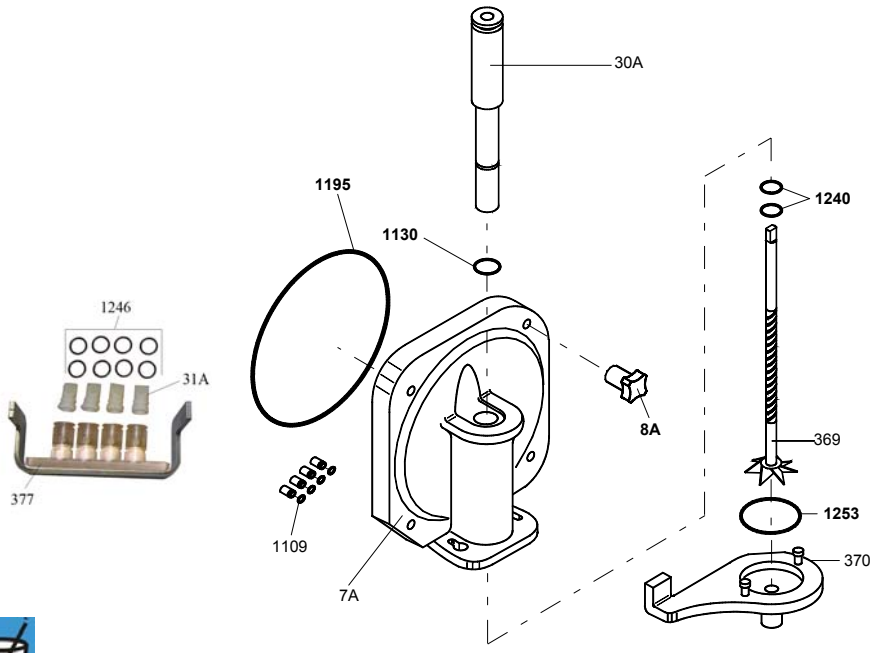


step 3
Using the O-ring extractor, remove the O-ring (#1412). Remove the spring (#206A) and the back flow valve (#245).
step 4
Unscrew the 2 knobs (#8B) and separate the cover (#202A) from the pump body (#39A).
step 5
Using the or-ring extractor, remove the large O-ring (#1178). Tapping the pump body against the palm of your hand, remove the pump gears (#38 and 38A).
step 6
Pull the connection tube (#207) from the pressure pipe. Remove the O-rings (#1131 and 1117) and the duck bill valve (#31).

6.1.4 DISASSEMBLING OF THE SHAKE DISPENSING DOOR

CAUTION
Before disassembling the dispensing head, make sure that the hopper and the cylinder are completely drained.

Pos.	Description
7A	Dispensing door
8A	Hand screws
30A	Piston
31A	Syrup duck bill valves
369	Spinner
370	Spout cap
377	Syrup valves support
1109	O-ring
1195	O-ring
1130	O-ring
1142	O-ring
1240	O-ring
1246	O-ring



step 1

With the machine in STOP mode, push

button to open the piston

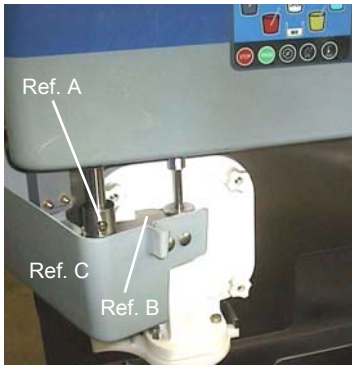
step 2
Open the protection cover (ref. C).

step 3
Slide up with the fingers the connection (ref. A) and turn clockwise the bracket (ref. B).

Step 4
Remove the cup holder.

Step 5
Twist spout cap (#370) clockwise then pull it down in order to remove it (the warning IMSB OPEN flashs on the display)

step 6
Slide the spinner out (#369).



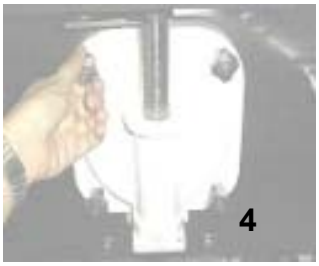
CAUTION
Be careful not to drop the spinner: it may be seriously damaged.

step 7
Unscrew the four door retaining knobs (#8A) and remove the dispensing door from the four studs by pulling it towards you. (Fig. 4)

step 8
Remove the valve block (#377) sliding it down.

step 9
Remove the 4 o-rings (#1109) from syrup outlet on the front of the machine

step 10
Holding the dispensing door (#7A) straight up, remove the piston by pulling it upward (Fig. 5)


4

5

step 11
Using the O-ring extractor, remove:
a) the piston O-ring (#1130).
b) the door O-ring (#1195).
c) the 2 piston housing O-rings (#1240) located inside the dispensing door.
d) the spout cap plate O-ring (#1253).
e) Remove the duck bill valves and the 8 o-rings (#1246) of the syrup valve block.

6.1.5 DISASSEMBLING OF THE SHAKE CYLINDER BEATER

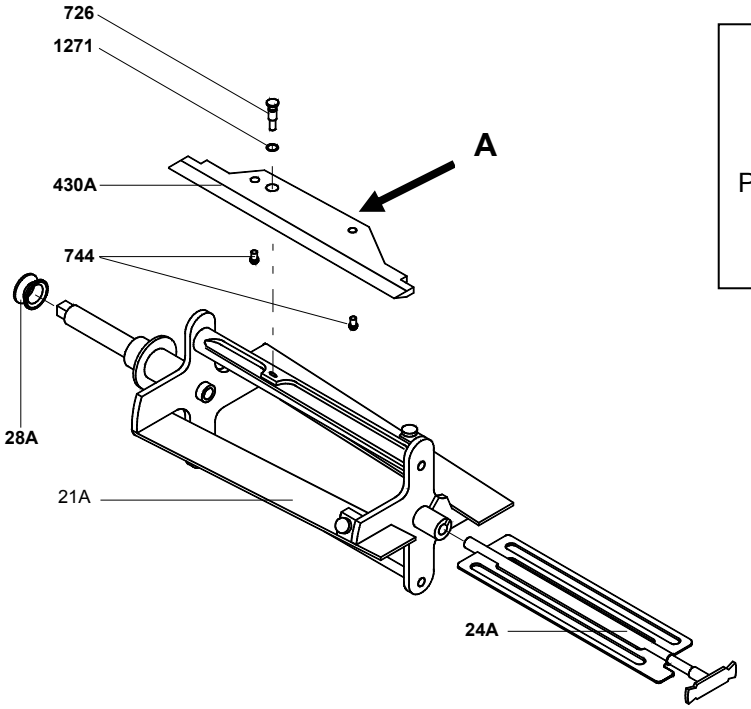
step 1
Remove the shake beater (#21) from the cylinder pulling it towards you.

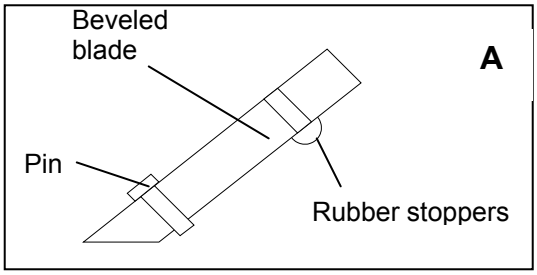
CAUTION!
Be careful not to hit the cylinder walls with the shaft of the beater when pulling it out.

step 2
Slide the beater seal (#28) out of the beater shaft.

CAUTION!
Make sure that the beater seal is in its place and be careful not to lose it and to reassemble it after washing.

step 3
Remove the idler (#24A) from the beater frame (#21A).
step 4
Remove the beater blade pin (#726) pulling it upward and remove the blade (#430).
step 5
Remove the pin O-ring (#1271).





Pos.	Description
21	Beater
24A	Counter beater
28A	Stuffing box (beater seal)
430A	Beater blade
726	Beater blade pin
1271	O-ring

6.2 DISASSEMBLING AND CLEANING THE SUNDAE SIDE

6.2.1 DRAINING AND CLEANING THE SUNDAE SIDE

Drain the machine

step 1

Place an empty pail under the SUNDAE spout.

step 2

Press the “STOP” button.

step 3

Pull the dispensing lever and drain the ice cream.

step 4

Press the button.

step 5

When the product coming out becomes liquid, push the “STOP” button and leave the spout open.

step 6

Remove the pressure tube

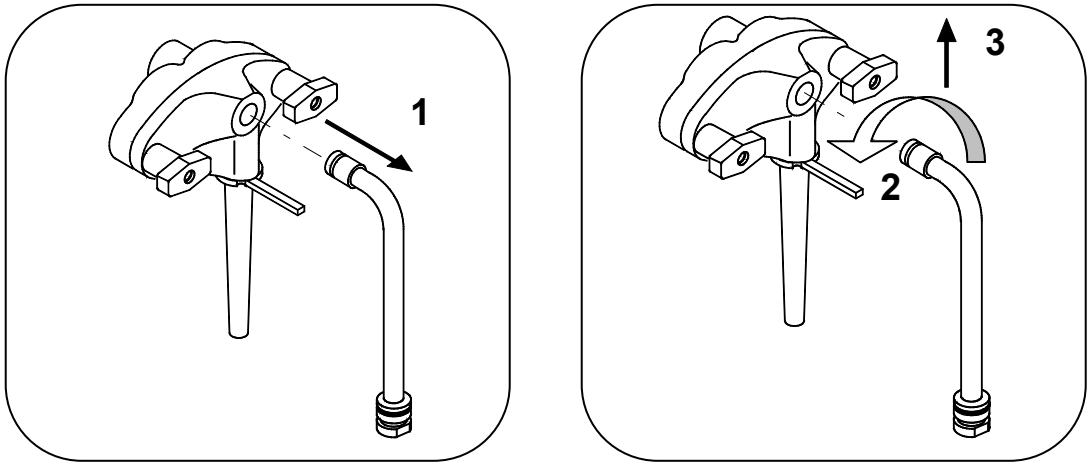
In the hopper, disconnect pressure pipe from the mix pump, turn it sideways, remove it pulling it up from its seat and let the product flow completely out.

Remove the mix pump:

Grasp the pump and turn it in a clockwise direction of 45° then pull it out towards you. Make sure that the pump drive shaft and seal are taken out with the pump.

Remove the mix agitator:

Remove the agitator by pulling it upwards.



step 7

Rinse the machine

Close the spout handle, pour 2,5 gallons (9.5 liters) of cool, clean water into the mix hopper.

Use the white hopper brush to scrub the mix hopper, mix level sensor and the outside the agitator shaft. Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.

Drain rinse water from hopper and cylinder

Place an empty pail under spout. Open the spigot piston and let the water drain out.

step 8

Rinse with warm water until the solution runs clear.

step 9

Press the button and let the beater run for 10 seconds.

step 10

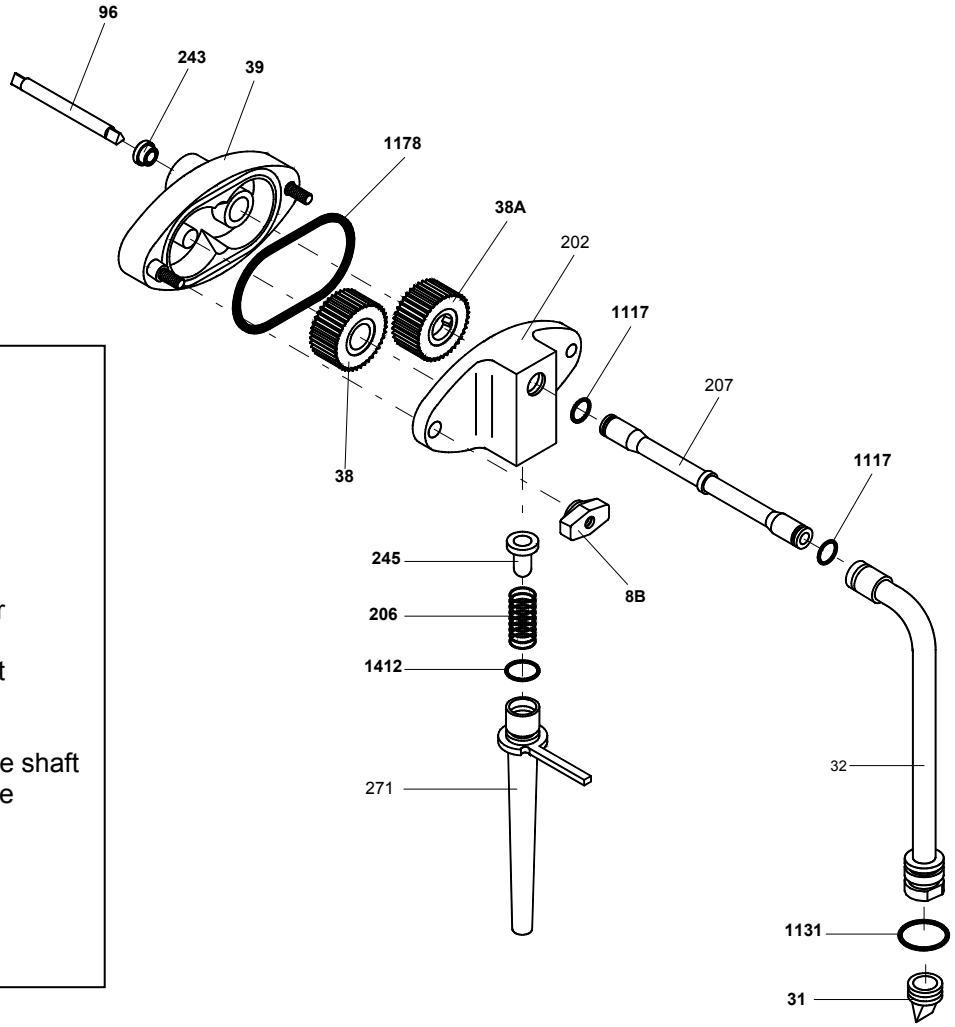
Turn the machine off by pushing the “STOP” button and let the water flow out.

step 11
Clean the machine
Fill the hopper with 2-1/2 gallons (9-1/2 liters) of warm APSC solution.
step 12
Clean the hopper walls, the level sensor and outside of the agitator shaft using the supplied brushes.

step 13
Pull the dispensing handle and let the liquid flow out completely.
step 14
Rinse the machine
Rinse with clear water, pull the spigot handle and let the water flow out.
step 15
Sanitize the machine
Fill the hopper with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM].
step 16
Press button and let the beater run for 10 seconds.
Use the white hopper brush to scrub the mix hopper, mix level sensor and the outside of the agitator shaft.
Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.
step 17
Push the “STOP” button. Let the McD Sanitizer solution stand for a minimum of 1 minute.
step 18
Pull the dispensing handle and let the water flow completely out.

6.2.2 DISASSEMBLING OF THE MIX PUMP

step 1
Remove driveshaft (#96) and seal (#243).
step 2
Keeping the feeding tube (#271) upward turn it counterclockwise and pull it out.
step 3
Pull the spring (#206) and the back flow valve (#245) out. Using the o-ring extractor, remove the O-ring (#1412).
step 4
Unscrew the 2 knobs (#8B) and separate the cover (#202) from the pump body (#39).
step 5
Using the o-ring extractor, remove the large O-ring (#1178). Tapping the pump body against the palm of your hand, remove the pump gears (#38-#38A).
step 6
Pull the connection tube (#207) from the pressure pipe. Remove the O-rings (#1131 and 1117) and the duck bill valve (#31).



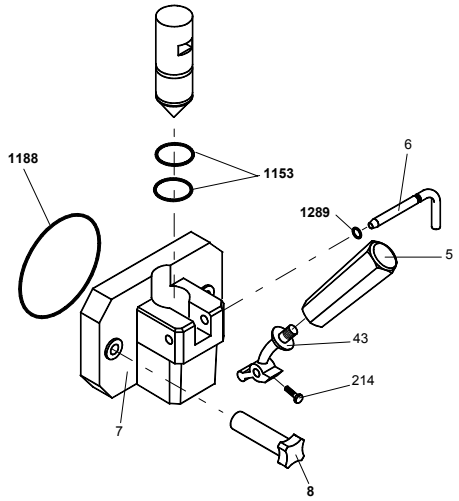
Pos.	Description
8B	Hand screws
31	Check valve-slit
32	Pressure pipe
38	Driven gear
38A	Driving gear
39	Pump hosing – rear
96	Pump drive shaft
202	Pump hosing - front
206	Spring
207	Connection tube
243	Seal mix pump drive shaft
245	Pressure relief valve
271	Feeding tube
1117	O-ring
1412	O-ring
1416	O-ring

6.2.3 DISASSEMBLING OF THE SUNDAE DISPENSING DOOR

CAUTION

Before disassembling the dispensing head, make sure that the hopper and the cylinder are completely drained.

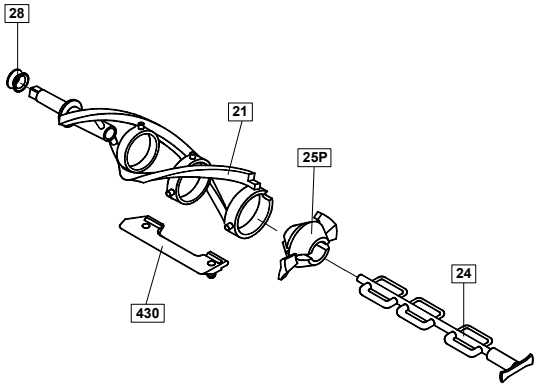
Pos.	Description
5	Dispensing handle
6	Handle pin
7	Soft serve door
8	Handscrews
30	Dispensing piston
43	Piston lever
1153	O-ring
1188	O-ring
1289	O-ring



step 1
With the machine in STOP mode, remove the two retaining knobs (#8) and pull the door assembly towards you sliding it off the two front panel studs.
step 2
Remove the pivot O-ring (#1289)
step 3
Pull the dispensing handle (#5) so the piston (#30) raises in its housing and pull the pivot pin (#6) out releasing the dispensing handle (#5).
step 4
Using the dispensing handle lever, pull the piston (#30) out completely .
step 5
Using the o-ring extractor, remove:

a) the 2 piston O-rings (#1153)
b) the large dispensing door O-ring (#1188)

6.2.4 DISASSEMBLING OF THE SUNDAE BEATER



step 1
Pull the beater (#21) out of the cylinder.
step 2
Slide the beater seal (#28) out of the beater shaft.
step 3
Pull out and remove the end pusher (#25P) and the idler (#24).
step 4
Remove the 3 beater blades (#430) .

CAUTION

The beater seal is very important. It must be checked regularly for wear and tear. It must always be on the beater shaft and properly lubricated, during operation, otherwise mix will leak in the drip tray.

6.3 WASHING AND SANITIZING OF COMPONENT PARTS

step 1
Fill a clean sink with the McD All Purpose Super Concentrate (APSC) and hot water 122-140°F (50-60°C) (or with hot McD APSC from the KayStar dispenser at the back sink).

step 2
Wash the disassembled parts with the APSC solution and scrub them thoroughly with the brushes provided with the machine. As you proceed, rinse with hot water. Make sure all lubricant and mix film is removed from parts.

step 3
Fill another sink with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM].

step 4
Place the parts in the sanitizing solution. Leave them there for a minimum of 1 minute.

step 5
Place the milk shake components on the milk shake tray to air-dry.

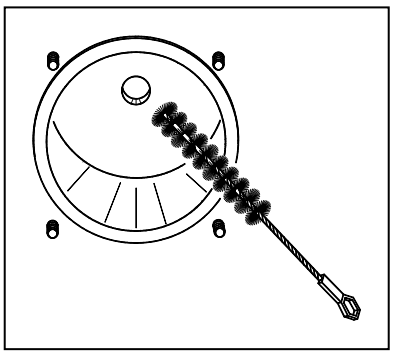
step 6
Place the sundae components on the sundae tray to air-dry.

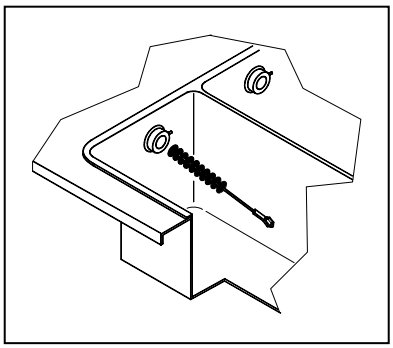
step 7
Return to the machine with a small amount of McD Sanitizer.

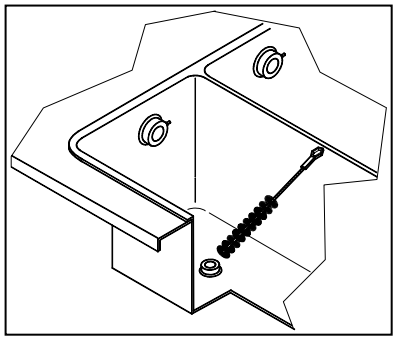
step 8
Dip a brush into the sanitizer and thoroughly brush both freezing cylinders.

step 9
Dip a brush into the sanitizer and thoroughly brush clean the mix inlet hole and the pump drive hub openings in the rear of both mix hoppers.

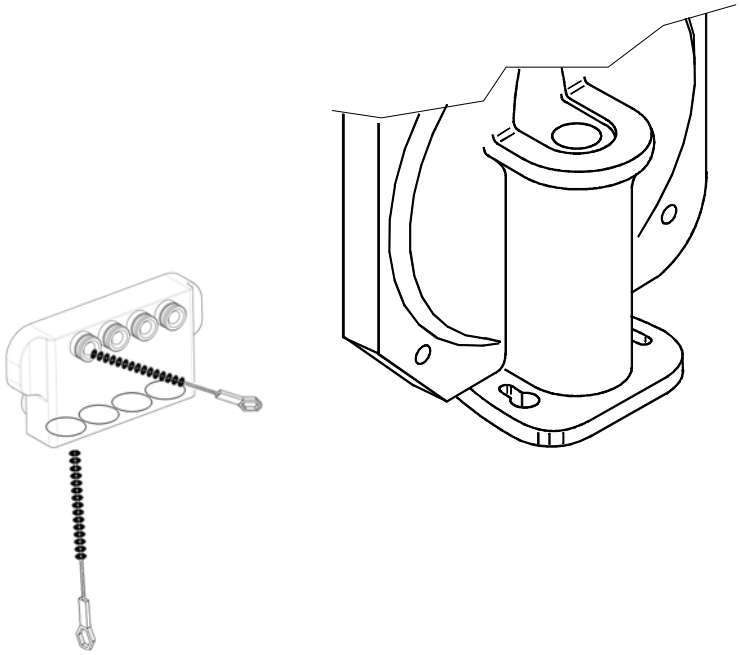
Step 10
Spray the back of cylinder with sanitizer.



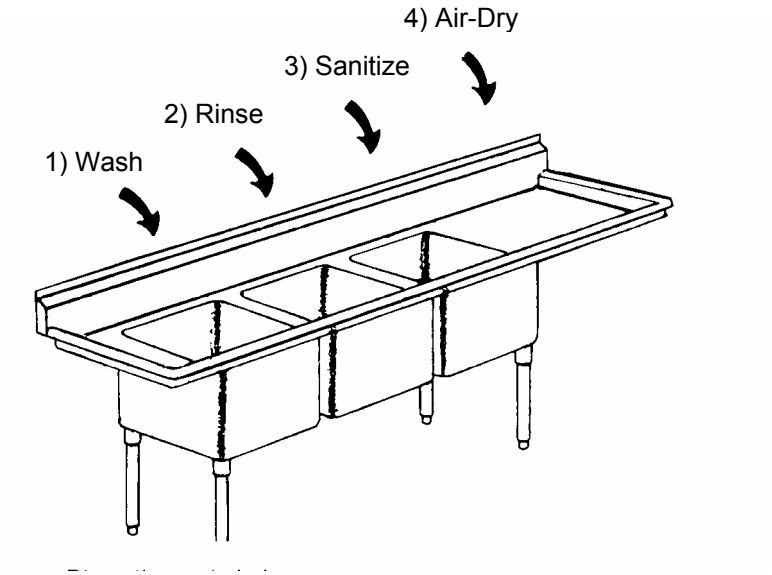




step 11
Dip a brush into the sanitizer solution thoroughly brush clean the syrup injectors located on the front panel just under the milk shake cylinder.



Repeat steps 8 , 9 and 10 several times .

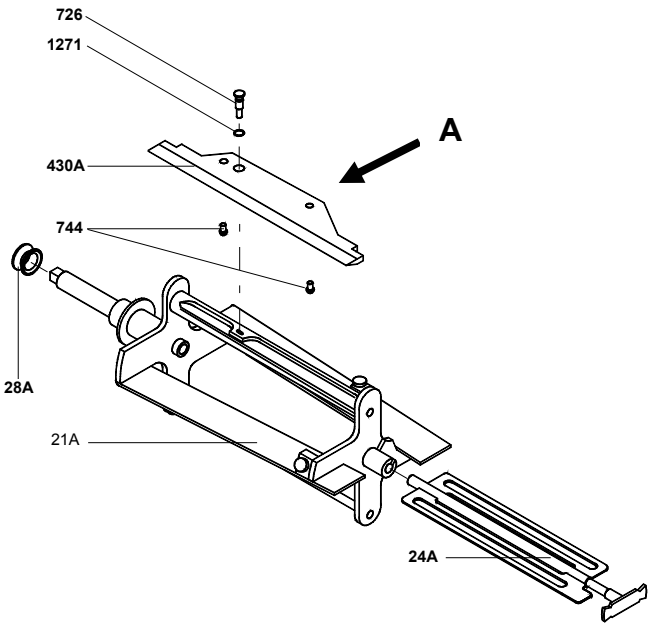


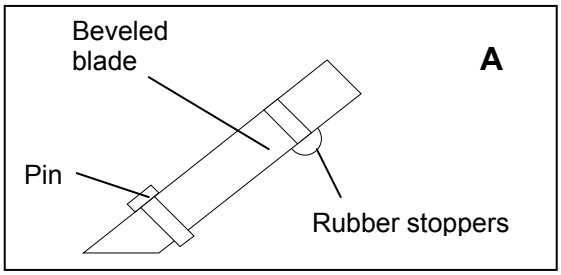
IMPORTANT!!
We recommend not to wash the Sundae and Milk Shake components all together

6.4 REASSEMBLY OF WASHED AND SANITIZED COMPONENT PARTS

6.4.1 REASSEMBLY OF THE SHAKE CYLINDER BEATER

step 1
Lubricate the blade pin O-ring (#1271) and slide it onto the pin (#726).





Pos.	Description
21A	Beater
24A	Counter beater
28A	Beater seal
430A	Beater blade
726	Beater blade pin
1271	O-ring

CAUTION!
Check the rubber stoppers for integrity. Replace if worn or damaged.

step 2
Place the blade (#430A) in its housing on the beater (#21A) aligning the pin hole with the hole on the beater. Secure the blade (#430A) onto the beater (#21A) inserting the beater blade pin (#726) into the blade and the beater hole. The head of the rubber stoppers should rest on the beater frame.

step 3
Replace the idler (#24A) in the beater frame (#21A) first inserting the front shaft into the slot of the beater front housing and then inserting the idler shaft into the rear housing. Push it towards the back, otherwise the idler may fall out.

step 4
Lubricate the sides of the beater seal (#28A) and slide it onto the beater shaft.

CAUTION!
The beater seal is very important. It must be checked regularly for wear and tear. It must always be on the beater shaft and properly lubricated, during operation, otherwise mix will leak in the drip tray.

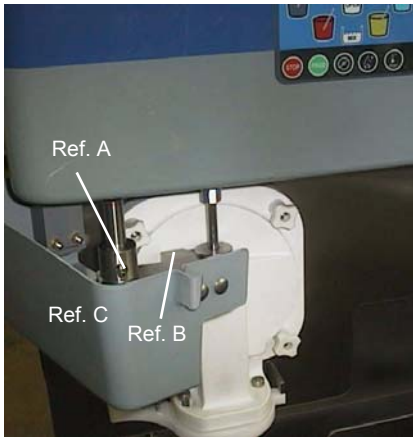
step 5
Insert the beater assembly into the cylinder, push it to the end and rotate it slightly until its shaft enters the rear hub: the self adjusting blade should be inside the rim of the cylinder.

6.4.2 REASSEMBLY OF THE SHAKE DISPENSING DOOR

step 1
Lubricate and replace the 4 syrup outlet o-rings (#1109) on the front panel of machine.
step 2
Lubricate the O-rings and replace them in their respective position i.e.:

a) Replace the 8 o-rings (#1246) on the syrup distribution block (#377),
b) Replace the 4 duck bill valves (#31A) on the syrup distribution block (#377),
c) Replace the syrup distribution block (#377) in its position on the front panel of the machine,
d) Replace the 2 piston housing O-ring (#1240) in the dispensing door,
e) Replace the O-ring (#1130) on the piston,
f) Replace the O-ring (#1195) on the dispensing door,
g) Replace the O-ring (#1142) on the spinner plate

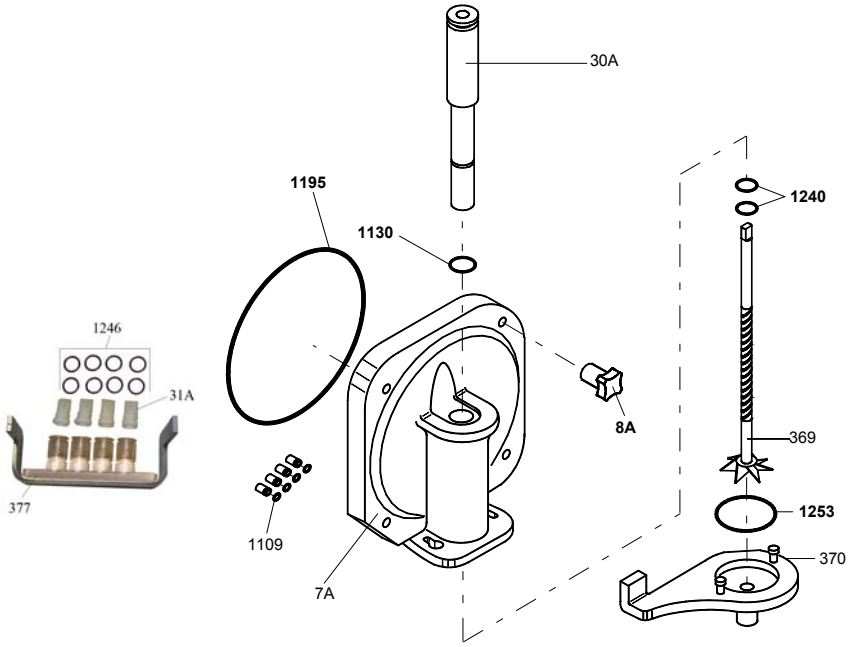
step 3
Holding the dispensing door (#7A) upward, lubricate and replace the piston (#30A) in its position in the front door.
step 4
Fit the dispensing door (#7A) in the four front panel studs and fasten it with the four knobs (#8A) hand-tightening them in alternate sequence.
step 5
Lubricate the spinner shaft and insert the spinner (#369) into its housing.
step 6
Mount the spinner plate (#370).
step 7
Move up the spigot piston, slide up the connection (ref. A) and close the bracket (ref. B) on the piston.
step 8
Close the protection cover (ref. C). Ensure cover is closed properly otherwise the machine will not operate.
step 9



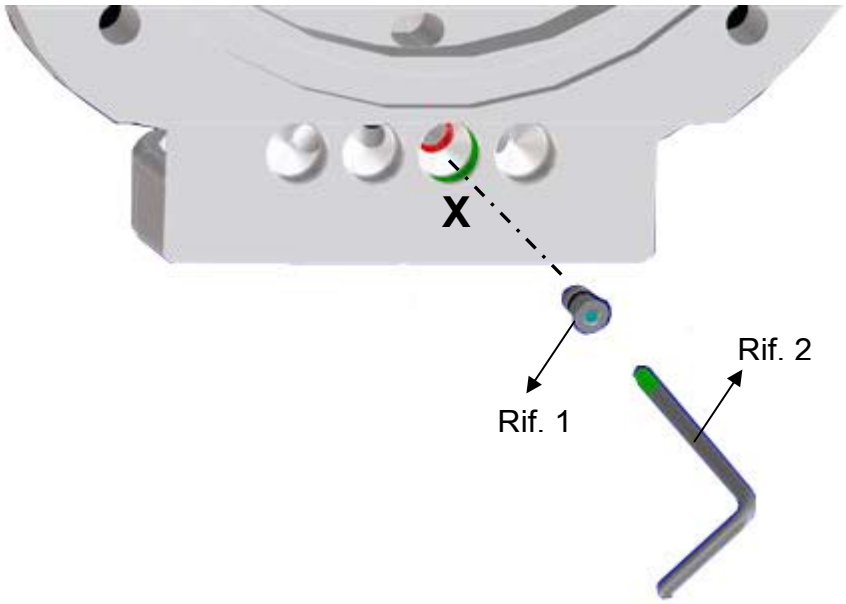
With the machine in STOP mode push the

button to close the piston

Pos.	Description
7A	Dispensing door
8A	Hand screws
30A	Piston
31A	Syrup duck bill valves
369	Spinner
370	Spout cap
377	Syrup valves support
1109	O-ring
1195	O-ring
1130	O-ring
1142	O-ring
1195	O-ring
1240	O-ring
1246	O-ring



6.4.2.1 Shake side warning – When using only 3 syrups.



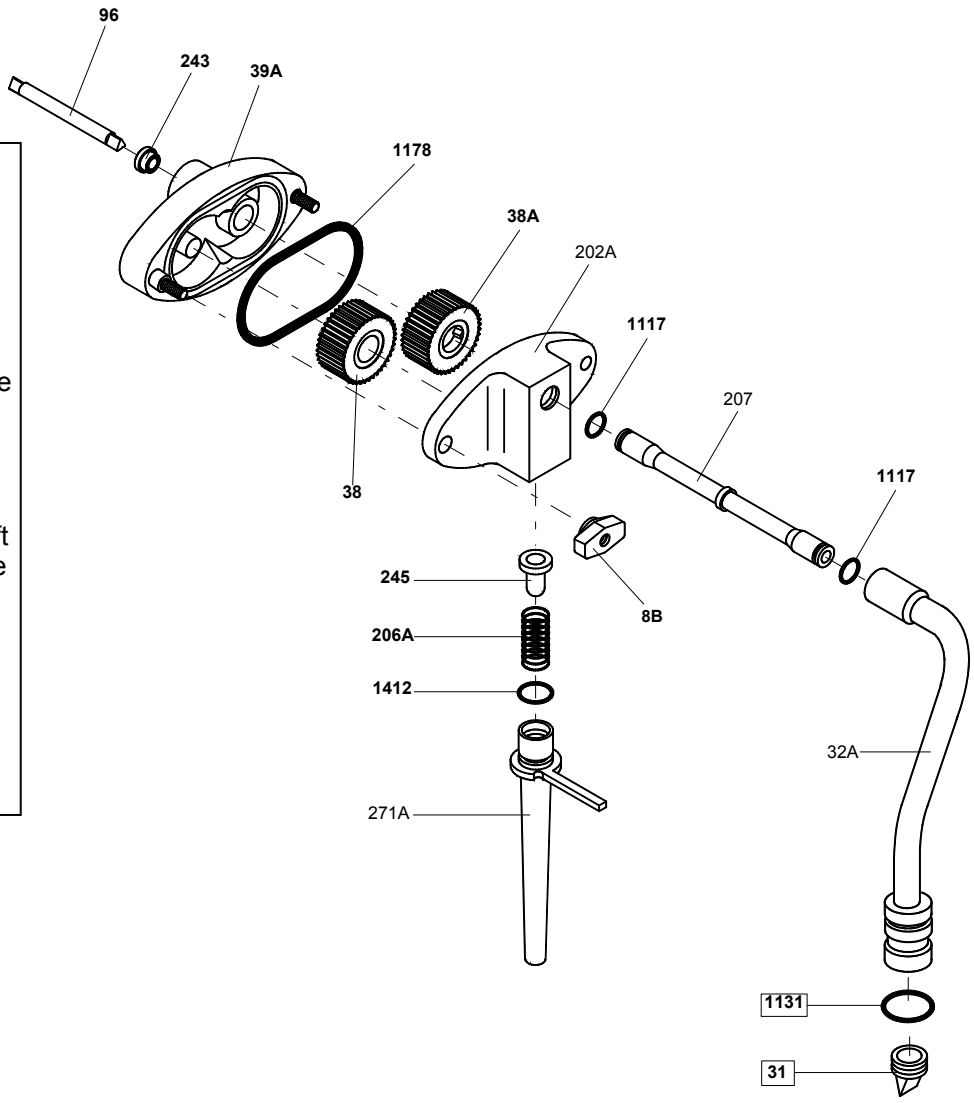
In case you are using only 3 syrup flavours, you should close the hole of the front lid using the tap ref. 1 delivered with the accessories.
This step can fit only in the hole indicated by X in the fig.
To block it firmly use the key ref. 2.
By doing so, the forth syrup flavour that corresponds to the blue cup button becomes disabled.
The tap and its o-ring should be disassembled, cleaned and sanitized during the periodical cleaning.

6.4.3 REASSEMBLY OF THE SHAKE MIX PUMP

step 1
Lubricate and replace the O ring (#1117) on the connection tube (#207).
step 2
Lubricate and replace the O-ring (#1131) and the duck bill valve (#31) on the pressure pipe (#32A).
step 3
Insert the connection tube assembly in the pressure pipe (#32A).
step 4
Place the pressure pipe in a sanitizing solution.
step 5
Insert the pump gears (#38-#38A) into the pump body (#39A).
step 6
Lubricate and replace the pump body O-ring (#1178).
step 7
Lubricate and replace the drive shaft seal (#243) into the pump body (#39A).
step 8
Lubricate and replace the O-ring (#1412) on the feeding tube (#271A).
step 9
Hold the pump cover (#202A) upside down and insert the back flow valve (#245) and spring (#206A) in their pump cover housing

step 10
Insert the feeding tube (#271A) in the pump cover: push and turn it clockwise.
step 11
Lubricate the drive shaft (#96). Position drive shaft into the rear of mix hopper, pushing it towards the back and rotating it slightly until it enters the drive hub. Hold the pump body assembly, with the blocking pin hook on the right, keep your thumbs over the pump gears so that they remain in place, push and turn the pump clockwise until the drive shaft mates with the driving gear. Now turn the pump counter clockwise until it locks onto the blocking pin.
step 12
Assemble the pump cover (#202A) with the feeding tube downwards onto the pump body and turn the two knobs (#8B) tightly.

8B	Hand screws
31	Check valve-slit
32A	Pressure pipe
38	Driving gear
38A	Driven gear
39A	Pump body
96	Pump shaft
100	Shake chamber tube
202A	Pump housing
206	Spring
207	Connection tube
271A	Feeding tube
243	Seal-mix pump shaft
245	Pressure relief valve
1104	O-ring
1117	O-ring
1131	O-ring
1178	O-ring
1412	O-ring
1416	O-ring

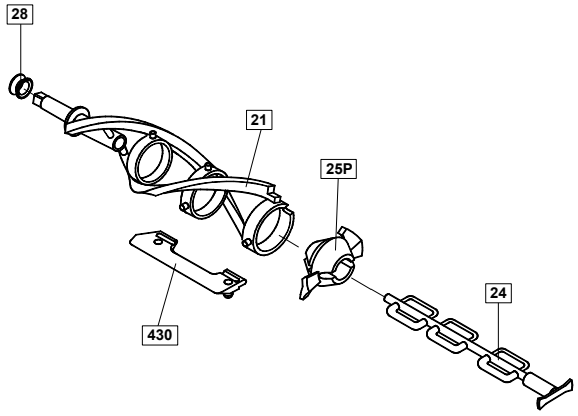


6.4.4 REASSEMBLY OF THE MIX HOPPER AGITATOR

step 1
Relocate the agitator back in its seat, pay attention to engage it onto its shaft correctly

6.5 REASSEMBLY OF WASHED AND SANITIZED COMPONENT PARTS

6.5.1 REASSEMBLY OF THE SUNDAE BEATER

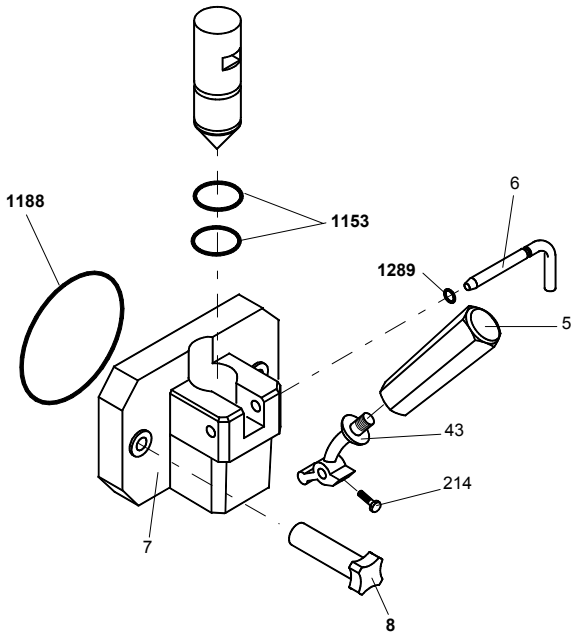


step 1
Insert the 3 beater blades (#430) onto the beater frame.
step 2
Insert the end pusher (#25P) onto the beater frame.
step 3
Insert the end of the idler shaft (#24) in the rear housing of the beater, through the end pusher. Push the idler into position.
step 4
Lubricate the sides of the beater seal (#28) and slide it onto the beater shaft.

IMPORTANT
Check the beater seal for integrity. Replace if worn or damaged. It should be replaced rather frequently.

step 5
Insert the beater assembly into the cylinder. Push it while turning it clockwise until it engages in its rear hub, otherwise the dispensing head cannot be fastened properly, mix can flow out and serious damage may occur.

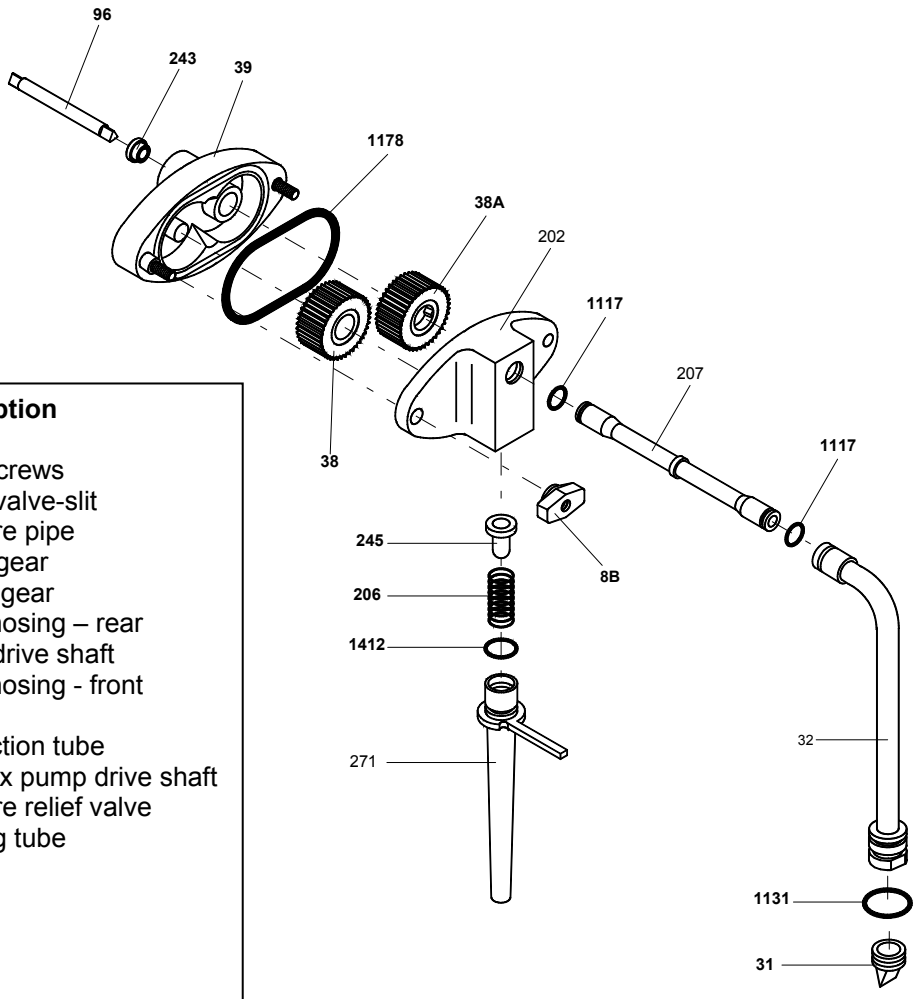
6.5.2 REASSEMBLY OF THE SUNDAE DISPENSING DOOR



step 1
Lubricate and slide the 2 piston O-ring (#1153) into their seats.
step 2
Lubricate the piston (#30) and insert it, pointed end down, in the dispensing head (#7) making sure that the piston square notch lines up with the rectangular opening on the spigot front.
step 3
Position the dispensing handle (#5) on the door (#7) and insert the pivot pin (#6) in its housing through the handle lever hole. Lubricate and slide the O-ring (#1289) into its seat on the pivot pin.
Lubricate and slide into its seat the large dispensing door O-ring (#1188).
step 4
Insert the dispensing door assembly onto the two front panel studs and fasten it with the two knobs (#8) hand tight.

6.5.3 REASSEMBLING OF THE SUNDAE MIX PUMP

step 1
Lubricate and replace the two O-rings (#1117) on the connection tube (#207).
step 2
Lubricate and replace the O-ring (#1131) and the duck bill valve (#31) on the pressure pipe (#32).
step 3
Insert the connection tube assembly in the pressure pipe (#32).
step 4
Place the pressure pipe in a sanitizing solution.
step 5
Insert the pump gears (#38-#38A) into the pump body (#39).
step 6
Lubricate and replace the pump body O-ring (#1178).
step 7
Lubricate and replace the drive shaft seal (#243) into the pump body (#39).
step 8
Lubricate and replace the O-ring (#1412) on the feeding tube (#271).
step 9
Hold the pump cover (#202) upside down and insert the back flow valve (#245) and spring (#206) in their pump cover housing.
step 10
Insert the feeding tube (#271) in the pump cover: push and turn it clockwise.
step 11
Lubricate the drive shaft (#96). Position drive shaft into the rear of mix hopper, pushing it towards the back and rotating it slightly until it enters the drive hub. Hold the pump body assembly, with the blocking pin hook on the right, keep your thumbs over the pump gears so that they remain in place, push and turn the pump clockwise until the drive shaft mates with the driving gear. Now turn the pump counter clockwise until it locks onto the blocking pin.
step 12
Assemble the pump cover (#202) with the feeding tube downwards onto the pump body and turn the two knobs (#8B) tightly.



Pos.	Description
8B	Hand screws
31	Check valve-slit
32	Pressure pipe
38	Driven gear
38A	Driving gear
40	Pump hosing – rear
96	Pump drive shaft
202	Pump hosing - front
206	Spring
208	Connection tube
243	Seal mix pump drive shaft
245	Pressure relief valve
272	Feeding tube
1117	O-ring
1178	O-ring
1412	O-ring
1416	O-ring

6.5.4 REASSEMBLING OF THE MIX TANK AGITATOR

step 1
Relocate the agitator back in its seat: pay attention to engage it onto its shaft correctly.

6.6 SANITIZING THE WHOLE MACHINE

The machine must be sanitized before mix is poured in.

carry out the following operations for both shake side and sundae side of the machine

NOTE

After the machine's brush cleaning, and more precisely from the moment you close the front door (lid) of the machine, it is necessary to run the machine in production (by pushing PROD. button) within 60 minutes. After the 60 minutes, the machine does not accept the PROD. button any more and it sets to heat-treatment function automatically. In other words, you should make the "Sanitization of the whole machine" and the "Mix Priming" within 60 minutes, then push PROD. button.

6.6.1 SANITIZE THE HOPPER

- Fill the hopper to the maximum level with McD Sanitizer prepared in water 70-90°F (21-32°C) [1 packet in 2-1/2 gal. (9-1/2 litres) of water = 100 PPM] and allow to drain into the cylinder.
- Using the brush, clean the mix level probes, the entire surface of the mix hopper, the surface of the mix pump and the outside of the hopper agitator.

6.6.2 SANITIZE THE PUMP AND FREEZING CYLINDER

- Press the push-button and let the beater run for about 10 seconds. Press the push-button "STOP". The cylinder and the pump are now filled with the sanitizing solution.
- Return to the machine with a small amount of McD sanitizer solution in a pail.
- Dip the door spout brush in the pail of sanitizer and brush clean the dispensing spout. Repeat the operation 2 times.
- Wipe the exterior of machine with clean sanitized towel. Repeat the operation 2 times.
- Wait for at least 5 minutes before proceeding with the next instructions.

6.6.3 DRAIN THE SANITIZER

- Place an empty pail under the draw spout and pull the handle (for SUNDAE side).
- Or press the "

" button (for the SHAKE side).
- Allow all of the sanitizer to drain.
- If the sanitizing solution does not flow out completely, keep the spigot open and press the button, keep the beater running for 5 seconds so that the last solution residues flow out then push STOP.

CAUTION
Do not keep the beater running for more than the time strictly needed to complete washing and sanitization. Without the lubrication of mix butterfat the beater blades wear out quickly.

6.7 SYRUP SANITIZING, PRIMING AND CALIBRATION (SHAKE SIDE)

Make sure your hands are clean and sanitized before performing the following procedures.

Sanitizing the syrup lines:

a) Fill an empty pail with McD sanitizer prepared in water 122-140°F (50-60°C) [1 packet in 2-1/2 gallons (9-1/2 liters) of water = 100 PPM] (and mix the powder).
b) Place the pick up tubes inside. Push STOP button, then the corresponding “coloured cup” button two times to run the syrup pump at maximum speed and let the sanitizing solution flow for 1 minute. Press STOP button to stop the syrup pump.
c) Repeat for all syrup lines.

Drain the sanitizer from the syrup lines

a) Remove the pick up tubes from the pail and put them on a clean towel in the cabinet. Place an empty pail under the draw spout and push STOP button, then push twice on each “coloured cup” button to run the syrup pumps and drain the residues of sanitizer.
b) Push STOP button to stop the pump.

Priming the syrup lines with syrup:

a) Place each pick up tube in its syrup jug or connect the syrup connector to the syrup bag.
b) Place empty bucket under the spout.
c) Press “coloured cup” button two times until the syrup is dispensed, discard this sample.
d) Press STOP button to stop the syrup pump.
e) Repeat for all syrup flavors.
f) Using a clean, sanitized towel, wipe the door cabinet.

WARNING
To avoid potential bacteria growth in the syrup system during operations, all the syrup lines must always be filled with syrup.

Calibrate syrups as follows:

- press “STOP” button, LED will light.
- place calibration cup under the spout.
- press “coloured cup” button to start the syrup pump and dispense syrup for 5 seconds (milk shake) or 7 seconds (TTS). The pump will automatically stop. During the syrup dispensing, the display indicates the “syrup number” and the speed of the pump.
- check syrup quantity; it should be 1 fluid ounce (30 ml), ±1/8 ounce.
- As soon as the piston closes and the syrup pump stops, the display keeps indicating the pump speed an the buttons flash for 3 seconds; during this period, push or in order to increase or decrease the speed of the pump. This adjustment becomes effective from the next time you push the syrup buttons.

Repeat the calibration for each flavor.

6.8 MIX PRIMING

Reminder

After the machine’s brush cleaning, and more precisely from the moment you close the front door (lid) of the machine, it is necessary to run the machine in production (by pushing PROD. button) within 60 minutes. After the 60 minutes, the machine does not accept the PROD. button any more and it sets to heat-treatment function automatically. In other words, you should make the “Sanitization of the whole machine“ and the “Mix Priming“ within 60 minutes, then push PROD. button.

Prime Hopper:

- Retrieve 1 bag of McD shake or sundae mix from the walk-in refrigerator.
- With the both sides of the machine in STOP mode, place an empty pail under the draw spouts.
- Pull the handle (for SUNDAE sides) or press the

button (for the SHAKE side).
- With the draw handle (SUNDAE side) or piston (SHAKE side) open, pour one bag of mix into the hoppers allowing it to drain into the freezing cylinders.
- When only full strength mix (not mix and sanitizer) is flowing from the draw spouts, close the draw handle (for SUNDAE side) or press the

button (for the SHAKE side).

Connect the mix pressure pipe:

- When the mix stops bubbling from the bottom of the hopper, take the mix pressure pipe from the sanitizing solution and insert it in its position in the bottom of the hopper. Make sure your hands are clean and sanitized. Press the button and let run the beater for only five seconds just to check the pumps work well, the push STOP.
- Turn the pressure pipe clockwise towards the pump and connect the tube to the pump.
- Press PROD. button to start the Automatic freezing operation.
- Replace the hopper cover.

7. MONTHLY CLEANING

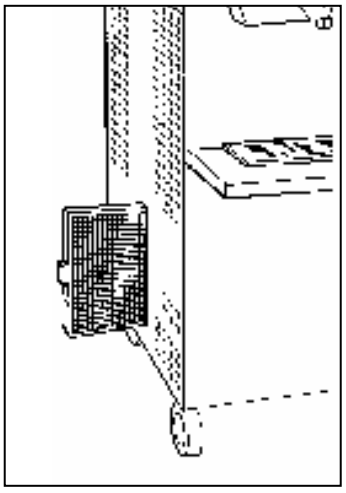
7.1 AIR FILTER CLEANING

It is necessary to clean the air filter every month, as follows:

Step 1
Locate and remove the filter from the equipment.
Step 2
At the back sink, prepare a warm solution of *McD All Purpose Super Concentrate (APSC) (HCS)* from the sink proportioner.
Step 3
Wash the filter thoroughly in the warm *McD All Purpose Super Concentrate (APSC) (HCS*) solution.
Step 4
After washing the mesh filter, rinse thoroughly using hot water from the hose at the back sink.

NOTE: *Flush in the opposite direction to normal air flow through the filter.*

Step 5
Shake all the water from the filter.
Step 6
Using a clean, sanitized towel, wipe any remaining moisture from the filter.
Step 7
Place the filter into the filter track.
Step 8
Push the filter in until it is seated.
Step 9
Cleaning the mesh filter is complete.



CAUTION
Never use sharp metal objects to execute this operation;
a regular operation of the freezing system mostly depends on condenser cleanout.

8. PREVENTATIVE MAINTENANCE

8.1 CHECK OUT LIST

During daily, weekly and fortnightly cleaning operations, check carefully the integrity of parts subject to wear: if they appear worn torn or not totally functional replace them. The manufacturer offers programmed maintenance plans that include the periodical replacement of parts subject to wear.

CHECK	SUGGESTED ACTION
SHAKE SIDE	
PUMP • Integrity of O-ring and overflow valves. • Dry smoothness of gears in their seats.	• If they show cuts, replace them. • If they do not turn well or turn too freely, replace them or have them checked by a technician.
DISPENSING DOOR • Check integrity of O-ring, check smoothness of piston.	• Replace if they show damage.
TANK MIXER • Check if it rotates freely.	• Reassemble
CYLINDER BEATER • Check if beater and counter beater show dents. • Integrity of beater seal (# 28).	• Replace if broken or cracked. • Replace if damaged
SUNDAE SIDE	
PUMP • Integrity of O-ring and overflow valves. • Dry smoothness of gears in their seats.	• If they show cuts, replace them. • If they do not turn well or turn too freely, replace them or have them checked by a technician.
DISPENSING LID • Check integrity of O-ring, check smoothness of piston.	• Replace if they show damage.
CYLINDER BEATER • check it beater and idler show dents. • integrity of beater seal (# 28).	• Replace it if broken or cracked. • Replace if damaged

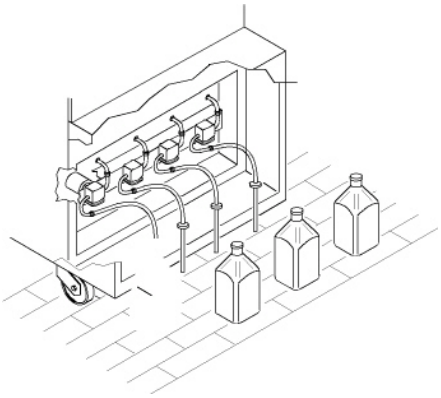
8.2 SIX MONTHS CHECK-UP AND MAINTENANCE

- Replace the syrup pump tube every 6 months.
- Replace rubber parts (O-ring, beater seal, rubber pipes, pressure relief valves).
- Check proper scraping action of the beater blade.
- Check the correct operation of syrup pumps (dispensed syrup quantity).

8.2.1 PERISTALTIC PUMP TUBE REPLACEMENT INSTRUCTION

Pump tube Removal

Step 1
Remove the syrup feed tubes from the syrup containers. Wipe the outside of the feed tubes with a clean, sanitized towel.



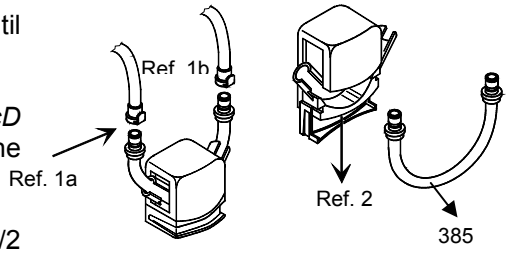
Step 2
Remove the syrup jugs.

Step 3
Place the syrup feed tubes in a pail of *McD All Purpose Super Concentrate (APSC) (HCS)* [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM.] To avoid contamination, cover syrup containers with a plastic wrap.

Step 4
Press STOP button. (LED On)

Step 5
Press twice the "coloured cup" button to start the flow of *McD All Purpose Super Concentrate (APSC) (HCS)* through the syrup line.

Step 6
Allow the *McD All Purpose Super Concentrate (APSC) (HCS)* to flow until all of the syrup is flushed from the line.



Step 7
Once the line is free of syrup, remove the syrup feed tube from the *McD All Purpose Super Concentrate (APSC) (HCS)* and run the pump until the syrup line is free from liquid.

Step 8
Repeat steps 3 through 8 using *McD Sanitizer (HCS)* [1 packet in 2-1/2 gal. (9-1/2 liters) of water = 100 PPM].

Step 9
Push on the quick coupling connector (ref. 1a) to disconnect the syrup pickup tube from the pump tube.

Step 10
Push on the quick coupling connector (ref. 1b) to disconnect the syrup feed tube from the pump tube.

Step 11
Open the pump by pushing down on the hinged cover (ref. 2).

Step 12
Grasp the pump tube (ref. 385) from one end, pull it up and pull out the second end, remove the pump tube.

Pump tube Installation

Step 1
Lubricate the o-rings on the syrup line fittings.

Step 2
Place the pump tube into the pump body.

Step 3
Pull up the pump cover to close it.

Step 4
Connect the syrup feed tube into the pump tube fitting.

Step 5
Connect the syrup pickup tube into the pump tube fitting.
Step 6
Replace the syrup jugs.
Step 7
Prime the syrup lines. Dispense one serving of syrup into a cup and discard this sample.
Step 8
Calibrate the syrup system according to the instructions in the equipment manual.

9. TROUBLESHOOTING

9.1 ALARMS

The machine is provided with a self-diagnosis function, which indicates any failure during operation.

The display blinks when an alarm is active and becomes on solid if an alarm was detected and then reset. Push RESET button in order to refresh the display when the alarm has been reset.

Use the following table to determine whether a service call is required (critical alarm). If a service call is required, write down the alarm message and inform the service company.
The machine can dispense product in case a non-critical alarm is active.

ALARM	DESCRIPTION	CORRECTIVE ACTION
Add Mix	Mix level is lower than the medium level sensor	**Pour the mix in the hopper**
Mix Out	Mix level is lower than the low level sensor	**Pour the mix in the hopper**
Safety Therm. Cyl (TESC)	Cylinder safety thermostat tripped. The machine switches to Stop without completing the heat treatment cycle. The mix is NOT pasteurized	**CALL FOR SERVICE**
Safety Therm. Hop TESV	Hopper safety thermostat tripped. The machines switches to Stop without completing the heat-treatment cycle. The mix is NOT pasteurized	**CALL FOR SERVICE**
Overload beater (PTMA)	Thermal relay of beater motor has tripped.	**CALL FOR SERVICE**
Pressure Switch (PR)	Pressure switch for high gas pressure has tripped.	Check air flow to the condenser, if not blocked **CALL FOR SERVICE**
Overload Compres PTMC	Thermal relay of compressor motor has tripped.	**CALL FOR SERVICE**
Al. Hopper probe (TEV)	Hopper temperature sensor is out of order.	**CALL FOR SERVICE**
Al. Cylind. Probe TEC	Cylinder temperature sensor is out of order.	**CALL FOR SERVICE**
Al. IceHop. Probe TGV	Hopper evaporator sensor is out of order	**CALL FOR SERVICE**
Spigot Opened (IMS)	Faceplate is open or disassembled.	Install the faceplate
Al Evapor.Probe (TE)	Temperature probe on cylinder out of order	**CALL FOR SERVICE**
Power on	A black out has occurred	
Ice Cylinder (ICE)	Bad heat exchange in the cylinder,	check mix pump efficiency, check the scraper blades…
Timeout Prd.	Cooling problem, the product is not getting hard while cooling;	**if this alarm appears frequently CALL FOR SERVICE**
Belt Alarm	The hopper agitator is not turning,	check that the mixer is positioned correctly, otherwise **CALL FOR SERVICE**
Wash In n days	It indicates the days remaining for next cleaning; when wash today appears the machine must be disassembled, cleaned and sanitized. Press RESET button to reset the message on the display.	
Do Not Serve!	Product under process;	please wait and don't serve yet
No Topping Water	The Water in the topping bin is lower than the sensor level	Add water in the topping bin
Al. Topping Probe	Temperature probe for topping heating is out of order	**CALL FOR SERVICE**
Pasto needed!	The machine is in soft lock condition; the mix must be pasteurized	run a pasteurization cycle until PASTO END appears to unlock the machine. Push STOP then PROD.

TECHNICAL SERVICE ON THE MACHINE

INTERVENTI DURANTE LA VITA DELLA MACCHINA

CARPIGIANI

MACCHINA MACHINE MACHINE MASCHINE	MATRICOLA MATRICLE SERIAL N° FABRIK-NR.	CLIENTE CLIENT CLIENT KUNDE
K 3		

INTERVEN. INSPECT. OPERATI. ARBEIT	DATA DATE DATE DATUM	TECNICO TECHNICIAN TECHNICIEN TECHNIKER	INCONVENIENTE PROBLEM PANNE STÖRUNG	CAUSA CAUSE CAUSE URTEIL	RIMEDIO REMEDY SOLUTION BESEITIGUNG	comunicato a: refered to: segnale a: (1) Mitteilung an:
Installazione Installation Installation Inbetriebsetzung						(2)
2		Chiamata del: Request call: Demande du: Meldung wom:				
3		Chiamata del: Request call: Demande du: Meldung vom:				
4		Chiamata del: Request call: Demande du: Meldung vom:				
5		Chiamata del: Request call: Demande du: Meldung vom:				
6		Chiamata del: Request call: Demande du: Meldung vom:				

(1) Spedire o consegnare a: Servizio Clienti BO - via Emilia, 45 40011 Anzola Emilia
(1) Please fill in this report and send it or deliver to: Servizio Clienti BO - via Emilia, 45 40011 Anzola Emilia
(1) S.V.P. remplisser ce formulaire et envoyer au: Servizio Clienti BO - via Emilia, 45 40011 Anzola Emilia
(1) Bitte einsenden oder aushändingen an: kunderndienstabt. Servizio Clienti BO - via Emilia, 45 40011 Anzola Emilia
(2) Fare firmare al Manager /o proprietario.
(2) Signature of the Manager /or franchisee.
(2) Signature du Manager /ou proprietaire.
(2) Unterschrift vom Manager /oder Inhaber